STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 134702

TO: Ralph J Gitomer **Location: 3d65 / 3e71** **Art Unit: 1651** **Friday, October 15, 2004** **Case Serial Number: 10/069836**	**From: Noble Jarrell** **Location: Biotech-Chem Library** **Rem 1B71** **Phone: 272-2556** **Noble.jarrell@uspto.gov**

Search Notes

JAN

Access DB# 134702

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: R Gitomer Examiner # : 69630 Date: 10/7/04
Art Unit: 1651 Phone Number 30 Serial Number: 10/069,836
Mail Box and Bldg Room Location: 3D65/3E71 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention:

Inventors (please provide full names):

Earliest Priority Filing Date:

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

JAN

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STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: Noble	NA Sequence (#)	STN 261
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic ✓	Dr.Link
Date Completed: 10/15/04	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 30	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 45	Other	Other (specify)

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=> d his

     (FILE 'HOME' ENTERED AT 13:55:16 ON 15 OCT 2004)

     FILE 'HCAPLUS' ENTERED AT 13:55:24 ON 15 OCT 2004
                E BURKETT D/AU
L1           21 E3,E13-14
                E EPITHELIAL TISSUE/CT
                E EPITHELIAL/CT
                E E13+ALL
                E E2+ALL
L2        16808 EPITHELIUM+NT/CT
L3           18 (ZILA OR CONGRESS (1A) FINANC?)/CS,PA
                E DYSPLATIC/CT
                E DYSPLASTIC/CT
L4            6 (L1 OR L3) AND L2

     FILE 'WPIX' ENTERED AT 13:59:03 ON 15 OCT 2004
                E BURKETT D/AU
L5           27 E3,E6
L6           50 (ZILA OR CONGRESS (1A) FINANC?)/CS,PA
L7            5 L5-6 AND DYSPLAST?/BIX

     FILE 'HCAPLUS' ENTERED AT 14:01:01 ON 15 OCT 2004

     FILE 'REGISTRY' ENTERED AT 14:01:17 ON 15 OCT 2004

     FILE 'HCAPLUS' ENTERED AT 14:01:20 ON 15 OCT 2004
L8              TRA L4 1- RN :       47 TERMS

     FILE 'REGISTRY' ENTERED AT 14:01:20 ON 15 OCT 2004
L9           47 SEA L8

=> b hcap
FILE 'HCAPLUS' ENTERED AT 14:01:30 ON 15 OCT 2004
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FILE COVERS 1907 - 15 Oct 2004  VOL 141 ISS 17
FILE LAST UPDATED: 14 Oct 2004  (20041014/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d all l4 tot

L4   ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:697099  HCAPLUS
DN   139:193967
ED   Entered STN:  05 Sep 2003
TI   Stain-directed molecular analysis for cancer prognosis and diagnosis
IN   Burkett, Douglas D.
PA   Zila, Inc., USA
SO   PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  C12Q001-68
CC   9-4 (Biochemical Methods)
     Section cross-reference(s): 14
FAN.CNT 2
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    --------------------   --------
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PI WO 2003072826 A1 20030904 WO 2002-US32067 20021005
W: AU, BR, CA, CN, IL, IN, JP, MX, NO, SG, US
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR
EP 1463838 A1 20041006 EP 2002-806902 20021005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR, BG, CZ, EE, SK
PRAI US 2001-17007 A 20011214
WO 2002-US32067 W 20021005
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003072826	ICM	C12Q001-68

AB The location at which tissue samples are obtained to determine whether cells exhibit characteristics associated with cell differentiation or cancer by mol. anal. is determined by topically applying to epithelial tissue a dye that selectively stains cancer and precancerous tissue.
ST stain mol analysis cancer prognosis diagnosis
IT Prognosis
(Cancer; stain-directed mol. anal. for cancer prognosis and diagnosis)
IT Animal tissue
(Precancerous; stain-directed mol. anal. for cancer prognosis and diagnosis)
IT Diagnosis
(cancer; stain-directed mol. anal. for cancer prognosis and diagnosis)
IT Animal cell
Animal tissue
Cell differentiation
Dyes
Epithelium
Extraction
Head
Head, neoplasm
Neck, anatomical
Neoplasm
Saliva
Samples
Staining, biological
Stains, biological
(stain-directed mol. anal. for cancer prognosis and diagnosis)
IT 64-17-5, Ethyl alcohol, biological studies 64-19-7, Acetic acid, biological studies 92-31-9, Toluidine blue o 6131-90-4, Sodium acetate trihydrate 7722-84-1, Hydrogen peroxide, biological studies 7732-18-5, Water, biological studies 388078-25-9, IFF Raspberry IC563457
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(stain-directed mol. anal. for cancer prognosis and diagnosis)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Polerantz; US 5882627 A1 1999 HCAPLUS
(2) Sidransky; US 6291163 B1 2001 HCAPLUS
(3) Sidransky; US 6025127 A1 2002 HCAPLUS

L4 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:89803 HCAPLUS
DN 136:131224
ED Entered STN: 01 Feb 2002
TI Improved diagnostic method for detecting dysplastic epithelial tissue
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K007-16
ICS A61K031-56; A61K049-00; C12Q001-68; G01N033-74
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002007693	A1	20020131	WO 2000-US20017	20000720

W: AT, AU, BR, CH, CN, CZ, HU, IL, IN, JP, KR, MX, NO, NZ, PL, RO, SG, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

BR 2000014130	A	20020820	BR 2000-14130	20000720
EP 1301164	A1	20030416	EP 2000-950579	20000720
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO, CY				
NZ 517637	A	20030530	NZ 2000-517637	20000720
JP 2004504615	T2	20040212	JP 2002-513430	20000720
NO 2002001355	A	20020319	NO 2002-1355	20020319
PRAI WO 2000-US20017	W	20000720		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002007693	ICM	A61K007-16
	ICS	A61K031-56; A61K049-00; C12Q001-68; G01N033-74
JP 2004504615	FTERM	2G045/BB24; 2G045/CB01; 2G045/CB02; 2G045/GC12

AB A method of intraoral toluidine blue staining is disclosed where the pre-rinse composition contains amphiphilic protein, such as albumin, which binds to extracellular matrix components such as fibronectin. In this way, the staining is more specific to precancerous and cancerous cells.

ST diagnostic detecting dysplastic epithelium tissue

IT Proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Amphiphilic; improved diagnostic method for detecting dysplastic epithelial tissue)

IT **Epithelium**
(Dysplastic; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Dyes
(Mitochondrial Marking; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Solvents
(Pharmacol. acceptable; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Diagnosis
(cancer; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Animal tissue
Cell
Composition
Extracellular matrix
Mitochondria
Solutions
Staining, biological
Stains, biological
Triticum aestivum
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Fibronectins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Albumins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Caseins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Globulins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Glutenins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Glutens
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Prolamins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(improved diagnostic method for detecting dysplastic epithelial tissue)
IT Washing
(rinsing; improved diagnostic method for detecting dysplastic epithelial tissue)
IT Albumins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(serum; improved diagnostic method for detecting dysplastic epithelial tissue)
IT 64-17-5, Ethyl alcohol, biological studies 64-19-7, Acetic acid, biological studies 81-88-9 81-93-6, Phenosafranin 92-31-9, Toluidine blue 92-32-0, Pyronine Y 97-26-7, Toluylene Blue 134-01-0, Peonidin 136-16-3, Oxythiamine 144-12-7, Tiemonium iodide 531-55-5, Azure B 531-57-7, Azure C 532-32-1, Sodium benzoate 569-64-2, Malachite Green 633-03-4, Brilliant Green 5118-17-2, Furazolium chloride 6131-90-4, Sodium acetate trihydrate 7722-84-1, Hydrogen peroxide, biological studies 7732-18-5, Water, biological studies 12040-44-7, Alcian Blue 58337-35-2, Elliptinium acetate 65589-70-0, Acriflavine 86090-24-6, Brilliant Cresyl Blue 388078-25-9, IFF Raspberry IC563457
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Burkett; US 6086852 A 2000 HCAPLUS
(2) Mashberg; US 4321251 A 1982 HCAPLUS
(3) Pomerantz; US 5882627 A 1999 HCAPLUS

L4 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:31738 HCAPLUS
DN 136:98823
ED Entered STN: 11 Jan 2002
TI Methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N003-00
ICS G01N029-00
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002003048	A1	20020110	WO 2000-US18161	20000630
	WO 2002003048	C1	20020725		
	W: AT, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NO, NZ, PL, RO, SG, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 2002035549	A5	20020422	AU 2002-35549	20000630
	EP 1212600	A1	20020612	EP 2000-948557	20000630
	R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	BR 2000013635	A	20020730	BR 2000-13635	20000630
	JP 2004502704	T2	20040129	JP 2002-508061	20000630
	NO 2002000959	A	20020424	NO 2002-959	20020227
PRAI	WO 2000-US18161	A	20000630		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002003048	ICM	G01N003-00
	ICS	G01N029-00
JP 2004502704	FTERM	4B063/QA19; 4B063/QQ02; 4B063/QQ08; 4B063/QR66; 4B063/QS36; 4B063/QX02; 4C085/HH13; 4C085/JJ02; 4C085/KB56; 4C085/KB57; 4C085/LL18

AB Methylene blue dye compns. and methods for detecting and/or delineating cancerous and precancerous epithelial tissue are presented.
ST methylene blue diagnostic agent detection epithelium cancer
IT Solvents
(Pharmaceutically acceptable aqueous; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Diagnosis
(agents; methylene blue diagnostic agent and diagnostic methods for

detection of epithelial cancer)
IT Diagnosis
(cancer; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Neoplasm
(epithelial; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Carcinoma
Composition
Dyes
Epithelium
Oxidizing agents
Stains, biological
(methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Washing
(rinsing; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT 61-73-4, Methylene blue 64-17-5, Ethyl Alcohol, biological studies 64-19-7, Acetic Acid, biological studies 92-31-9, Toluidine blue o 532-32-1, Sodium benzoate 613-11-6, Leuco Methylene blue 6131-90-4, Sodium Acetate Trihydrate 7722-84-1, Hydrogen Peroxide, biological studies 7732-18-5, Water, biological studies 388078-25-9, IFF Raspberry IC 563457
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bacus; US 5485527 A 1996
(2) Joshi; WO 9908528 A1 1999 HCAPLUS
(3) Pomerantz; US 5882627 A 1999 HCAPLUS
(4) Stephen; US 5301688 A 1994

L4 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:31288 HCAPLUS
DN 136:98847
ED Entered STN: 11 Jan 2002
TI Rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K049-00
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002002149	A1	20020110	WO 2000-US18126	20000630
	W: AT, AU, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NO, NZ, PL, RO, SG, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1294408	A1	20030326	EP 2000-946949	20000630
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO, CY				
	JP 2004501982	T2	20040122	JP 2002-506770	20000630
	NZ 517445	A	20040326	NZ 2000-517445	20000630
	NO 2002000958	A	20020424	NO 2002-958	20020227
PRAI	WO 2000-US18126	W	20000630		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002002149	ICM	A61K049-00
JP 2004501982	FTERM	4C085/HH13; 4C085/KB55; 4C085/KB57; 4C085/LL18

AB Rhodamine dye compns. and methods for detecting and/or delineating cancerous and precancerous epithelial tissue.
ST rhodamine diagnostic agent detection epithelium cancer
IT Solvents
(Pharmaceutically acceptable aqueous; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)

IT Diagnosis
(agents; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Diagnosis
(cancer; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Neoplasm
(epithelial; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT **Epithelium**
(lesions; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Carcinoma
Color
Composition
Drugs
Epithelium
Mixing
Oxidizing agents
Stains, biological
(rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Washing
(rinsing; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT 13558-31-1
RL: DGN (Diagnostic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(leuco; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT 64-17-5, Ethyl Alcohol, biological studies 64-19-7, Acetic Acid, biological studies 92-31-9, Toluidine blue o 532-32-1, Sodium benzoate 6131-90-4, Sodium Acetate Trihydrate 7722-84-1, Hydrogen Peroxide, biological studies 7732-18-5, Water, biological studies 388078-25-9, IFF Raspberry IC 563457
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Iype; Cancer Research 1985, V45, P2184 HCAPLUS
(2) Shishido; US 5618831 A 1997 HCAPLUS

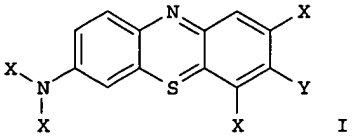
L4 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:564838 HCAPLUS
DN 135:134287
ED Entered STN: 03 Aug 2001
TI In vivo stain compounds and methods of use to identify dysplastic tissue
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-5415
ICS C07D279-36
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001054696	A1	20010802	WO 2000-US2602	20000131
	W: AU, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NO, PL, SG, SK, TR, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1165087	A1	20020102	EP 2000-915730	20000131
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 2000009427	A	20020716	BR 2000-9427	20000131
	JP 2003520816	T2	20030708	JP 2001-554680	20000131
	ZA 2001007818	A	20020923	ZA 2001-7818	20010921
	NO 2001004720	A	20011127	NO 2001-4720	20010928
PRAI	WO 2000-US2602	W	20000131		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001054696	ICM	A61K031-5415
	ICS	C07D279-36

OS MARPAT 135:134287
GI



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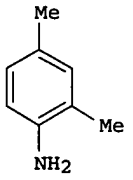

II

AB Compds. having the structural formula I wherein X is hydrogen, Me, or Y; Y is -NH-R or hydrogen; and R is Me or formula II are useful as in vivo stains for the detection of dysplastic tissue.

ST stain compd dysplastic tissue

IT Chemical formula
Composition
Epithelium
Stains, biological
(In vivo stain compds. and methods of use to identify dysplastic tissue)

IT Animal tissue
(dysplastic; In vivo stain compds. and methods of use to identify dysplastic tissue)

IT 47078-64-8P 352005-59-5DP, derivs. 352005-60-8P 352005-61-9P 352005-62-0P 352005-63-1P 352005-65-3P
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(In vivo stain compds. and methods of use to identify dysplastic tissue)

IT 95-53-4, o-Toluidine, reactions 99-98-9, N,N-Dimethyl-1,4-phenylenediamine 7646-85-7, Zinc Chloride, reactions 7758-99-8, Copper Sulfate Pentahydrate 7778-50-9, Potassium Dichromate 10102-17-7, Sodium Thiosulfate Pentahydrate 16828-11-8, Aluminum Sulfate Hexadecahydrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(In vivo stain compds. and methods of use to identify dysplastic tissue)

IT 43035-11-6P 352005-64-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(In vivo stain compds. and methods of use to identify dysplastic tissue)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Jiao; Talanta, CAPLUS 1999:227432 1999, V48(5), P1095 HCAPLUS
(2) Kishida Kagaku Kk; JP 63187154 A 1988 HCAPLUS
(3) Mashberg; US 4321251 A 1982 HCAPLUS

L4 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:503460 HCAPLUS
DN 113:103460
ED Entered STN: 16 Sep 1990
TI Protective film for body tissues containing hydroxypropyl cellulose and weak carboxylic acids
IN Pomerantz, Edwin
PA **Zila** Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-60
ICS A61K035-78; A61K033-22
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 33
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 8910745	A1	19891116	WO 1988-US2515	19880725
	W: AU, BR, DK, FI, JP, KR, NO, US				
	RW: AT, BE, CH, DE, FR, GB, IT, NL, SE				
	AU 8822523	A1	19891129	AU 1988-22523	19880725
	WO 9001046	A1	19900208	WO 1989-US3216	19890724
	W: AU, BR, DK, JP, KR, NO, US, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8940536	A1	19900219	AU 1989-40536	19890724
	AU 614179	B2	19910822		
	EP 380647	A1	19900808	EP 1989-909293	19890724
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	CA 1337396	A1	19951024	CA 1989-606614	19890725
	DK 9000753	A	19900525	DK 1990-753	19900322
	NO 9001346	A	19900323	NO 1990-1346	19900323
	NO 180618	B	19970210		
	NO 180618	C	19970521		
PRAI	US 1988-189032	A2	19880502		
	WO 1988-US2515	A	19880725		
	WO 1989-US3216	A	19890724		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8910745	ICM	A61K031-60
	ICS	A61K035-78; A61K033-22

AB A composition for in situ formation of a protective film on body tissues comprises hydroxypropyl cellulose and a weak carboxylic acid in a nontoxic volatile polar solvent, e.g. EtOH. The carboxylic acids are salicylic acid, tannic acid, and mixts. thereof. A crosslinking agent, e.g. boric acid, improves the properties of the film. The body tissue is dried and the composition is applied and air-dried to form the film in situ. The films function as sustained-release matrixes for topical medicines, as effective barriers to air, saliva, and foods, and provide effective pain relief in the treatment of recurrent aphthous stomatitis. A composition contained EtOH 87, hydroxypropyl cellulose 2.5, tannic acid 7.0, salicylic acid 2.5, and boric acid 1.0%. The composition was applied as a thin coating to the aphthous ulcer sites in the mouths of human patients. The film was in place in 80% of the test patients' mouths 2 h after application, whereas in all subjects of the control group the medication completely disappeared from the ulcer sites.

ST hydroxypropyl cellulose carboxylate film aphthous stomatitis

IT **Epithelium**
(film for, hydroxypropyl cellulose esters with weak carboxylic acids in)

IT Coating materials
(for animal tissues, hydroxypropyl cellulose esters with weak carboxylic acids as)

IT Animal tissue
(protective film for, hydroxypropyl cellulose esters with weak carboxylic acids in)

IT Ulcer inhibitors
(aphthous, hydroxypropyl cellulose ester protective film as)

IT Mouth
(disease, aphthous stomatitis, treatment of, with hydroxypropylcellulose ester protective film)

IT Tannins
RL: BIOL (Biological study)
(esters, with hydroxypropyl cellulose, protective film for animal tissues containing)

IT Pharmaceutical dosage forms
(films, sustained-release, from hydroxypropyl cellulose esters with weak carboxylic acids for)

IT 9004-34-6
RL: USES (Uses)
(coating materials, for animal tissues, hydroxypropyl cellulose esters with weak carboxylic acids as)

IT 10043-35-3, Boric acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydroxypropyl cellulose ester film crosslinking with, for animal tissue protection)

IT 9004-64-2D, Hydroxypropyl cellulose, esters with weak carboxylic acids
RL: BIOL (Biological study)
(in situ formation of, as protective film for body tissues)

IT 69-72-7, biological studies
RL: BIOL (Biological study)
(protective film for animal tissues containing)

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=> b wpix
FILE 'WPIX' ENTERED AT 14:01:48 ON 15 OCT 2004
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FILE LAST UPDATED:          11 OCT 2004      <20041011/UP>
MOST RECENT DERWENT UPDATE:     200465        <200465/DW>
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    HIT STRUCTURES WITHIN THE BIBLIOGRAPHIC DOCUMENT  <<<

=> d all l7 tot

L7   ANSWER 1 OF 5  WPIX  COPYRIGHT 2004 THE THOMSON CORP on STN
AN   2004-180149 [17]   WPIX
DNN  N2004-143362       DNC C2004-071112
TI   Manufacturing of Toluidine Blue O useful for identification of
     dysplastic tissue involves oxidizing N,N-dimethyl-p-
     phenylenediamine or N-dimethyl-p-phenylenediamine to form an indamine,
     followed by introducing sulfur-containing nucleophile.
DC   B04 E23 S03
IN   OKOLOTOWICZ, K
PA   (ZILA-N) ZILA INC
CYC  36
PI   WO 2003103569   A2 20031218 (200417)* EN   40    A61K000-00
        RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
         W: AU BR CN CZ HU IL IN JP KR MX NO NZ PL RU SG SK US
     AU 2002312319   A1 20031222 (200445)             A61K000-00
ADT  WO 2003103569 A2 WO 2002-US17720 20020604; AU 2002312319 A1 AU 2002-312319
     20020604, WO 2002-US17720 20020604
FDT  AU 2002312319 A1 Based on WO 2003103569
PRAI WO 2002-US17720      20020604
IC   ICM  A61K000-00
AB   WO2003103569 A UPAB: 20040310
     NOVELTY - Manufacture of Toluidine Blue O, involves oxidizing a starting
     material comprising at least one of N,N-dimethyl-p-phenylenediamine and
     N-dimethyl-p-phenylenediamine, in the presence of o-toluidine and
     introducing a source of sulfur-containing nucleophile to form S-indaminyl
     thiosulfate.
          DETAILED DESCRIPTION - Manufacture of Toluidine Blue O (TBO) product
     involves:
          (1) oxidizing a starting material comprising at least one of
     N,N-dimethyl-p-phenylenediamine and N-dimethyl-p-phenylenediamine, in the
     presence of o-toluidine in a first reaction mixture to form an indamine,
     without forming S-phenyl thiosulfate; and
          (2) introducing a source of sulfur-containing nucleophile into the
     first reaction mixture to form S-indaminyl thiosulfate.
          INDEPENDENT CLAIMS are also included for the following:
          (a) a composition (C1) comprising TBO or N-demethylated derivative of
     TBO (both having ring methyl group at 2C position), as at least 73 weight% of
     the total organic dye content of the composition;
          (b) a composition (C2) comprising TBO and N-demethylated derivative
     of TBO (both having ring methyl group at 2C position), where TBO and
     N-demethylated derivative of TBO comprises at least 70 weight% of the total
     organic dye content of the composition;
          (c) preparation of (C1) and (C2) involving:
          (1) synthesizing an indamine; and
          (2) synthesizing an S-indaminyl thiosulfate;
```

(d) treatment (T1) of **dysplastic** tissue involving application of TBO product to human tissue; and

(e) analysis of a TBO dye product by HPLC method involving:

(1) forming the mobile phase as a composition including heptanesulfonic acid; and

(2) forming a second mobile phase composition comprising alcohol (50 volume%).

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - Cell growth inhibitor.

USE - For identification of **dysplastic** tissue; and for treating **dysplastic** tissue (claimed); as a chemotherapeutic agent against cancerous or precancerous tissue; and for treating cancer patient.

ADVANTAGE - The process maximizes the content of TBO drug substance, without unduly complicating the expense and complexity of the manufacturing procedure. The method provides a more pure staining dye for use in clinical procedure for locating cancerous and pre-cancerous tissue.

Dwg.0/6

FS CPI EPI
FA AB; DCN
MC CPI: B06-F05; B11-C07B; B11-C08D2; B12-K04A; B14-H01; E25-E01
EPI: S03-E14H6

L7 ANSWER 2 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 2002-241550 [29] WPIX
DNN N2002-186559 DNC C2002-072643
TI Decreasing false positives rate in **dysplastic** epithelial tissue detection method by applying protein to suspect tissue locus before applying mitochondrial marker, which inhibits extracellular matrix component staining.
DC B04 D16 S03
IN **BURKETT, D D**
PA (ZILA-N) **ZILA INC**
CYC 40
PI WO 2002007693 A1 20020131 (200229)* EN 14 A61K007-16
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE
W: AT AU BR CH CN CZ HU IL IN JP KR MX NO NZ PL RO SG SK TR UA US ZA
AU 2001018402 A 20020205 (200236) A61K007-16
NO 2002001355 A 20020319 (200241) A61K000-00
BR 2000014130 A 20020820 (200263) A61K007-16
CN 1374855 A 20021016 (200311) A61K007-16
EP 1301164 A1 20030416 (200328) EN A61K007-16
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT RO SE
NZ 517637 A 20030530 (200341) A61K007-16
JP 2004504615 W 20040212 (200413) 20 G01N033-48
ADT WO 2002007693 A1 WO 2000-US20017 20000720; AU 2001018402 A WO 2000-US20017 20000720, AU 2001-18402 20000720; NO 2002001355 A WO 2000-US20017 20000720, NO 2002-1355 20020319; BR 2000014130 A BR 2000-14130 20000720, WO 2000-US20017 20000720; CN 1374855 A CN 2000-813014 20000720, WO 2000-US20017 20000720; EP 1301164 A1 EP 2000-950579 20000720, WO 2000-US20017 20000720; NZ 517637 A NZ 2000-517637 20000720, WO 2000-US20017 20000720; JP 2004504615 W WO 2000-US20017 20000720, JP 2002-513430 20000720
FDT AU 2001018402 A Based on WO 2002007693; BR 2000014130 A Based on WO 2002007693; EP 1301164 A1 Based on WO 2002007693; NZ 517637 A Based on WO 2002007693; JP 2004504615 W Based on WO 2002007693
PRAI WO 2000-US20017 20000720
IC ICM A61K000-00; A61K007-16; G01N033-48
ICS A61K031-56; A61K049-00; C12Q001-68; G01N033-74
AB WO 200207693 A UPAB: 20020508

NOVELTY - Detecting **dysplastic** epithelial tissue, comprising topically applying a mitochondrial marking agent to the locus of suspect tissue which selectively stains cancerous and precancerous cells, decreasing the rate of false positives comprises inhibiting the marking of extracellular matrix components by the stain, by applying a protein to the locus, prior to application of the stain, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the use of an amphiphilic protein to pretreat epithelial tissue before application of a mitochondrial marking agent for detecting cancerous or precancerous tissue, to bind extracellular matrix proteins and reduce the likelihood of a false positive indication.

USE - The method is useful for decreasing the rate of false positives of a diagnostic method for detecting and/or delineating cancerous or precancerous epithelial tissue (claimed). The binding of marking agent to extracellular matrix components such as fibronectin is prevented.

ADVANTAGE - False positive rate of diagnostic methods that involve

topical application of a dye that selectively stains cancerous and precancerous epithelial tissue is markedly reduced. The undesired temporary binding of mitochondrial marking agents to extracellular matrix proteins is largely prevented by pretreating the area of epithelium to which the marking agent is to be applied with a non-toxic amphiphilic protein.
Dwg.0/0
FS CPI EPI
FA AB; DCN
MC CPI: B04-F02; B04-N04; B11-C07B1; B11-C08E1; B12-K04A1; D05-H08; D05-H09
EPI: S03-E14H

L7 ANSWER 3 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 2001-529696 [58] WPIX
DNC C2001-157981
TI New biological stain compounds useful for detecting **dysplastic** tissue e.g. cancerous tissue.
DC B02
IN **BURKETT, D D**
PA (ZILA-N) **ZILA INC**
CYC 38
PI WO 2001054696 A1 20010802 (200158)* EN 51 A61K031-5415
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE
W: AU BR CA CN CZ HU IL IN JP KR MX NO PL SG SK TR US ZA
AU 2000036956 A 20010807 (200174) A61K031-5415
NO 2001004720 A 20011127 (200208) A61K000-00
EP 1165087 A1 20020102 (200209) EN A61K031-5415
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
SK 2001001378 A3 20020205 (200213) A61K031-5415
CZ 2001003504 A3 20020417 (200231) C07D279-36
KR 2001108431 A 20011207 (200236) C07D279-20
CN 1345241 A 20020417 (200250) A61K031-5415
BR 2000009427 A 20020716 (200255) A61K031-5415
HU 2002001634 A2 20020930 (200272) A61K031-5415
ZA 2001007818 A 20021127 (200305)# 53 A61K000-00
JP 2003520816 W 20030708 (200347) 33 C07D279-36
MX 2001009797 A1 20021101 (200376) A61K031-5415
ADT WO 2001054696 A1 WO 2000-US2602 20000131; AU 2000036956 A AU 2000-36956 20000131, WO 2000-US2602 20000131; NO 2001004720 A WO 2000-US2602 20000131, NO 2001-4720 20010928; EP 1165087 A1 EP 2000-915730 20000131, WO 2000-US2602 20000131; SK 2001001378 A3 WO 2000-US2602 20000131, SK 2001-1378 20000131; CZ 2001003504 A3 WO 2000-US2602 20000131, CZ 2001-3504 20000131; KR 2001108431 A WO 2000-US2602 20000131, KR 2001-712461 20010928; CN 1345241 A CN 2000-805853 20000131, WO 2000-US2602 20000131; BR 2000009427 A BR 2000-9427 20000131, WO 2000-US2602 20000131; HU 2002001634 A2 WO 2000-US2602 20000131, HU 2002-1634 20000131; ZA 2001007818 A ZA 2001-7818 20010921; JP 2003520816 W WO 2000-US2602 20000131, JP 2001-554680 20000131; MX 2001009797 A1 WO 2000-US2602 20000131, MX 2001-9797 20010928
FDT AU 2000036956 A Based on WO 2001054696; EP 1165087 A1 Based on WO 2001054696; SK 2001001378 A3 Based on WO 2001054696; CZ 2001003504 A3 Based on WO 2001054696; BR 2000009427 A Based on WO 2001054696; HU 2002001634 A2 Based on WO 2001054696; JP 2003520816 W Based on WO 2001054696; MX 2001009797 A1 Based on WO 2001054696
PRAI WO 2000-US2602 20000131; ZA 2001-7818 20010921
IC ICM A61K000-00; A61K031-5415; C07D279-20; C07D279-36
ICS A61K049-00
AB WO 200154696 A UPAB: 20011010
NOVELTY - Biological stain compounds (I) are new.
DETAILED DESCRIPTION - Biological stain compounds of formula (I) are new:
X = H, methyl or Y';
Y' = -NH-R or H; and
R = methyl or 3-methyl-4-amino phenyl.
USE - In detecting **dysplastic** tissue by staining **dysplastic** epitheleal tissue (claimed). e.g. for detecting **dysplastic** oral tissue (particularly cancerous and precancerous tissue).
ADVANTAGE - The compounds selectively stain and delineate **dysplastic** tissue.
Dwg.0/1
FS CPI
FA AB; GI; DCN
MC CPI: B06-F04; B11-C08; B12-K04A1

L7 ANSWER 4 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2001-256285 [26] WPIX
CR 1999-347409 [29]; 2001-535357 [59]; 2003-028561 [02]
DNC C2001-077123
TI Production of toluidine blue O by oxidizing N,N'-dimethyl-p-phenylenediamine, introducing thiosulfate ions source, oxidizing and condensing with O-toluidine.
DC B07 E23
IN **BURKETT, D D**
PA (ZILA-N) **ZILA INC**
CYC 4
PI US 6194573 B1 20010227 (200126)* 7 C07D279-18
MX 9809501 A1 20000101 (200126) G01N033-574
AU 757963 B 20030313 (200328) A61K049-00
KR 357968 B 20030124 (200339) A61K031-54
ADT US 6194573 B1 CIP of WO 1997-US20981 19971113, US 1998-110788 19980706; MX 9809501 A1 WO 1997-US20981 19971113, MX 1998-9501 19981113; AU 757963 B AU 1998-89456 19981021; KR 357968 B KR 1998-48303 19981112
FDT AU 757963 B Previous Publ. AU 9889456; KR 357968 B Previous Publ. KR 99045206
PRAI US 1998-110788 19980706; WO 1997-US20981 19971113
IC ICM A61K031-54; A61K049-00; C07D279-18; G01N033-574
ICS C07C303-20; C09B021-00
AB US 6194573 B UPAB: 20030619
NOVELTY - Toluidine blue O is prepared by oxidizing N,N'-dimethyl-p-phenylene-diamine in the presence of a source of thiosulfate ions at low temperature.
DETAILED DESCRIPTION - Production of toluidine blue O (TBO) comprises:
(A) oxidizing N,N'-dimethyl- rho -phenylenediamine in a first reaction mixture;
(B) introducing a source of thiosulfate ions into the first reaction mixture, while maintaining the temperature of the mixture at not higher than 10 deg. C, to form a first intermediate, 2-amino-5-dimethylamino thiosulfonic acid;
(C) further oxidizing and condensing the intermediate with o-toluidine, to form a second intermediate, indamine thiosulfonic acid;
(D) further oxidizing the second intermediate to close the indamine ring to form a TBO-containing reaction product in a third reaction mixture;
(E) introducing a TBO-complexing agent into the reaction mixture before the third reaction mixture is formed; and
(F) separating the product from the reaction mixture.
USE - TBO is useful for in vivo application to human tissue in diagnostic applications to identify **dysplastic** tissues.
ADVANTAGE - TBO compositions are manufactured in improved yields, leading to manufacturing economies and increased productive capacity of the manufacturing equipment.
Dwg.0/1
FS CPI
FA AB; DCN
MC CPI: B06-F04; B12-K04A; E25-E01

L7 ANSWER 5 OF 5 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1999-347409 [29] WPIX
CR 2001-256285 [26]; 2001-535357 [59]; 2003-028561 [02]
DNN N1999-259755 DNC C1999-102222
TI New in vivo toluidine blue O stains.
DC B04 P31 S03
IN **BURKETT, D D**; DOUGLAS, B D; **BURKETT, D**
PA (ZILA-N) **ZILA INC**; (BURK-I) BURKETT D D
CYC 45
PI WO 9925388 A1 19990527 (199929)* EN 57 A61K049-00
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE
W: AU BR CA CN CZ HU IL JP KR MX NO NZ PL RO SG SK TR US
CZ 9803555 A3 19990616 (199929) A61K049-00
NO 9805260 A 19990514 (199929) A61K006-00
ZA 9802010 A 19981230 (199931) 61 A61K000-00
AU 9889456 A 19990603 (199933) A61K049-00
HU 9802577 A2 19990728 (199936) C07D279-18
JP 11209357 A 19990803 (199941) 17 C07D279-20
AU 9853574 A 19990607 (199943)
CA 2250731 A1 19990513 (199944) EN C09B021-00
SG 67571 A1 19990921 (199945) A61K031-535
CN 1225278 A 19990811 (199950) A61K049-00
EP 966957 A2 19991229 (200005) EN A61K009-00
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT

RO SE SI

BR 9804625	A	20000321	(200028)	C09B021-00
KR 99045206	A	19990625	(200036)	A61K031-54
US 6086852	A	20000711	(200037)	
SK 9801512	A3	20000711	(200050)	A61K009-00
AU 757963	B	20030313	(200328)	A61K049-00
KR 357968	B	20030124	(200339)	A61K031-54
TW 527185	A	20030411	(200366)	A61K031-395

ADT WO 9925388 A1 WO 1997-US20981 19971113; CZ 9803555 A3 CZ 1998-3555 19981104; NO 9805260 A NO 1998-5260 19981111; ZA 9802010 A ZA 1998-2010 19980310; AU 9889456 A AU 1998-89456 19981021; HU 9802577 A2 HU 1998-2577 19981106; JP 11209357 A JP 1998-295607 19981016; AU 9853574 A WO 1997-US20981 19971113, AU 1998-53574 19971113; CA 2250731 A1 CA 1998-2250731 19981021; SG 67571 A1 SG 1998-4175 19981012; CN 1225278 A CN 1998-124142 19981110; EP 966957 A2 EP 1998-308824 19981028; BR 9804625 A BR 1998-4625 19981112; KR 99045206 A KR 1998-48303 19981112; US 6086852 A WO 1997-US20981 19971113, US 1999-308760 19990520; SK 9801512 A3 SK 1998-1512 19981104; AU 757963 B AU 1998-89456 19981021; KR 357968 B KR 1998-48303 19981112; TW 527185 A TW 1998-101438 19980204

FDT AU 9853574 A Based on WO 9925388; US 6086852 A Based on WO 9925388; AU 757963 B Previous Publ. AU 9889456; KR 357968 B Previous Publ. KR 99045206

PRAI WO 1997-US20981 19971113; US 1998-110788 19980706

IC ICM A61K000-00; A61K006-00; A61K009-00; A61K031-395; A61K031-535; A61K031-54; A61K049-00; C07D279-18; C07D279-20; C09B021-00
ICS A61B010-00; A61P035-04; C07C303-20; C07C381-00; C07C381-04; C09B067-22; G01N030-02; G01N030-36; G01N030-88; G01N031-00; G01N033-48; G01N033-574; G01N033-58

AB WO 9925388 A UPAB: 20031014

NOVELTY - A new composition of matter comprises the conformational isomers of toluidine blue O and N-demethylation derivatives of the isomers, wherein the ratio of the combined areas of the 254 nm HPLC peaks representing the isomers to the combined areas of the peaks representing the N-demethylation derivatives is at least about 6:1.

DETAILED DESCRIPTION - A new composition of matter comprising:

(a) a first group of components comprising the conformationals isomer of toluidine blue O having the ring methyl group in the 2 position, the N-demethylation derivative thereof and the N,N-demethylation derivative thereof; and

(b) a second groups of components, comprising the conformational isomer of toluidine blue O having the ring methyl group in the 4 position, the N-demethylation derivative thereof and the N,N-demethylation derivative thereof; wherein the ratio of the combined areas of the 254 nm HPLC peaks representing the first group to the combined areas of the HPLC peaks representing the second group being at least about 2.5:1.

INDEPENDENT CLAIMS are included for:

(A) A method of identification of **dysplastic** tissue by applying the dye in a liquid carrier to human oral tissue;

(B) An improved method for the manufacture of TBO compositions comprises:

(i) oxidizing N,N-dimethyl-p-phenylene) diamine in a first reaction mixture to form a first intermediate, 2-amino-5-dimethylaminophenyl thiosulfonic acid;

(ii) oxidizing the first intermediate and condensing the oxidize in a second reaction mixture with o-toluidine, forming a second intermediate, indamine-thio-sulfonic acid;

(iii) oxidizing the second intermediate to close the indamine ring, forming a TBO-containing reaction product dissolved in a third reaction mixture;

(iv) introducing a complexing reagent into the mixture to form a TBO-complex product dissolved in the third reaction mixture;

(v) precipitating the TBO-complex product for the reaction mixture; and

(vi) separating the TBO-complex product, containing the conformational isomers of TBO and N-demethylation and N,N-demethylation derivatives thereof, from the reaction mixture. Wherein the improvement comprises introducing the complexing reagent to a reaction mixture before the formation of the third reaction mixture.

(C) The N-demethylated and N,N-demethylated derivatives of one of the conformational isomers of toluidine Blue O.

USE - The in vivo stain composition is used for identifying oral **dysplastic** tissue.

Dwg.0/3

FS CPI EPI GMPI

FA AB; DCN

MC CPI: B06-F05; B12-K04A
EPI: S03-E09; S03-E14H

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                E EPITHELIAL/CT
                E E13+ALL
                E E2+ALL
L2        16808 EPITHELIUM+NT/CT
L3           18 (ZILA OR CONGRESS (1A) FINANC?)/CS,PA
                E DYSPLATIC/CT
                E DYSPLASTIC/CT
L4            6 (L1 OR L3) AND L2

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L6           50 (ZILA OR CONGRESS (1A) FINANC?)/CS,PA
L7            5 L5-6 AND DYSPLAST?/BIX

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L8              TRA L4 1- RN :       47 TERMS

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L9           47 SEA L8

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L12        2146 L10 NOT L11
L13        1469 L12 AND (PY<=2000 OR PRY<=2000 OR AY<=2000 OR PD<20000720 OR AD
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                E E3+ALL
L14      143147 DYES+OLD,NT/CT
                E INDICATORS/CT
                E E3+ALL
L15       19697 INDICATORS+OLD,NT/CT
                E TRACERS/CT
                E E3+ALL
L16        9803 TRACERS+NT/CT
L17         267 L14-16 (L) MITOCHOND?
L18           0 L13 AND L17
                E STAINING, BIOLOGICAL/CT
                E E3+ALL
L19        9789 "STAINING, BIOLOGICAL"+NT/CT
L20          96 L19 (L) MITOCHOND?
L21           8 L13 AND L19-20
                E PROTEIN/CT
                E E3+ALL
                E E2
                E POLYPEPTIDE/CT
                E POLYPEPTIDES/CT
                E E3+ALL
                E PEPTIDES/CT
                E E3+ALL
L22      448333 PEPTIDES+NT/CT
L23     1047987 PROTEIN#/CW
L24         625 L22-23 (L) AMPHIPHIL?
L25           3 L21 AND L22-24
                E AMINO ACID/CT
                E AMINO ACIDS/CT
                E E3+ALL
L26           0 AMINO ACIDS+OLD,NT/CT AND L21

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L27       21259 A10.272./CT AND (C4. OR B4.909.574. OR D13.444.735.615. OR D13.
L28      148623 (D27.720.470.330. OR E5.200.500.620.670.)/CT
L29       18125 L27 AND PY<=2000
L30         873 L29 AND L28
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L31       84341 (A11.284.430.214.190.875.564. OR A11.284.835.626.)/CT
L32          14 L30 AND L31
L33           4 L32 AND (D12.644. OR D12.776. OR D12.125.)/CT
                E BURKETT D/AU
L34           2 E3,E5
L35          19 (ZILA OR CONGRESS (1A) FINANC?)/CS
L36           0 L33 AND L34-35

     FILE 'WPIX' ENTERED AT 16:27:50 ON 15 OCT 2004
L37      142785 (B04-N? OR C04-N? OR B04-B04A? OR C04-B04A?)/MC OR (V751 OR V75
L38       22363 (B04-F02 OR C04-F02)/MC OR G01N033-48?/IC,ICM,ICS
L39      100372 (A08-E? OR E21? OR E22? OR E23? OR E24? OR E25?)/MC OR C09B/IC,
L40      132528 (B11-C08E1 OR C11-C08E1 OR B11-C07B? OR C11-C07B? OR B12-K04A1
L41        6219 L37 AND L38
L42          37 L41 AND L39
L43          33 L42 AND L40
L44           0 L43 AND L5-6
L45          13 L43 NOT (PY>2000 OR AY>2000 OR PRY>2000)

     FILE 'HCAPLUS' ENTERED AT 16:39:56 ON 15 OCT 2004
L46           8 L21 OR L25

=> b hcap
FILE 'HCAPLUS' ENTERED AT 16:40:53 ON 15 OCT 2004
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FILE COVERS 1907 - 15 Oct 2004  VOL 141 ISS 17
FILE LAST UPDATED: 14 Oct 2004  (20041014/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


=> d all l11 tot

L11  ANSWER 1 OF 5  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:697099  HCAPLUS
DN   139:193967
ED   Entered STN:  05 Sep 2003
TI   Stain-directed molecular analysis for cancer prognosis and diagnosis
IN   Burkett, Douglas D.
PA   Zila, Inc., USA
SO   PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  C12Q001-68
CC   9-4 (Biochemical Methods)
     Section cross-reference(s): 14
FAN.CNT 2
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2003072826        A1    20030904    WO 2002-US32067        20021005
         W:  AU, BR, CA, CN, IL, IN, JP, MX, NO, SG, US
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT,
             LU, MC, NL, PT, SE, SK, TR
     EP 1463838            A1    20041006    EP 2002-806902         20021005
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI, CY, TR, BG, CZ, EE, SK
PRAI US 2001-17007        A     20011214
     WO 2002-US32067      W     20021005
CLASS
 PATENT NO.      CLASS  PATENT FAMILY CLASSIFICATION CODES
```

WO 2003072826 ICM C12Q001-68

AB The location at which tissue samples are obtained to determine whether cells exhibit characteristics associated with cell differentiation or cancer by mol. anal. is determined by topically applying to epithelial tissue a dye that selectively stains cancer and precancerous tissue.

ST stain mol analysis cancer prognosis diagnosis

IT Prognosis
(Cancer; stain-directed mol. anal. for cancer prognosis and diagnosis)

IT Animal tissue
(Precancerous; stain-directed mol. anal. for cancer prognosis and diagnosis)

IT Diagnosis
(cancer; stain-directed mol. anal. for cancer prognosis and diagnosis)

IT Animal cell
Animal tissue
Cell differentiation
Dyes
Epithelium
Extraction
Head
Head, neoplasm
Neck, anatomical
Neoplasm
Saliva
Samples
Staining, biological
Stains, biological
(stain-directed mol. anal. for **cancer** prognosis and diagnosis)

IT 64-17-5, Ethyl alcohol, biological studies 64-19-7, Acetic acid, biological studies 92-31-9, Toluidine blue o 6131-90-4, Sodium acetate trihydrate 7722-84-1, Hydrogen peroxide, biological studies 7732-18-5, Water, biological studies 388078-25-9, IFF Raspberry IC563457
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(stain-directed mol. anal. for cancer prognosis and diagnosis)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Polerantz; US 5882627 A1 1999 HCAPLUS
(2) Sidransky; US 6291163 B1 2001 HCAPLUS
(3) Sidransky; US 6025127 A1 2002 HCAPLUS

L11 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:89803 HCAPLUS

DN 136:131224

ED Entered STN: 01 Feb 2002

TI Improved diagnostic method for detecting dysplastic epithelial tissue

IN **Burkett, Douglas D.**

PA **Zila**, Inc., USA

SO PCT Int. Appl., 14 pp.
CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K007-16
ICS A61K031-56; A61K049-00; C12Q001-68; G01N033-74

CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002007693	A1	20020131	WO 2000-US20017	20000720
	W: AT, AU, BR, CH, CN, CZ, HU, IL, IN, JP, KR, MX, NO, NZ, PL, RO, SG, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	BR 2000014130	A	20020820	BR 2000-14130	20000720
	EP 1301164	A1	20030416	EP 2000-950579	20000720
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO, CY				
	NZ 517637	A	20030530	NZ 2000-517637	20000720
	JP 2004504615	T2	20040212	JP 2002-513430	20000720
	NO 2002001355	A	20020319	NO 2002-1355	20020319
PRAI	WO 2000-US20017	W	20000720		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES

WO 2002007693	ICM	A61K007-16
	ICS	A61K031-56; A61K049-00; C12Q001-68; G01N033-74
JP 2004504615	FTERM	2G045/BB24; 2G045/CB01; 2G045/CB02; 2G045/GC12

AB A method of intraoral toluidine blue staining is disclosed where the pre-rinse composition contains amphiphilic protein, such as albumin, which binds to extracellular matrix components such as fibronectin. In this way, the staining is more specific to precancerous and cancerous cells.

ST diagnostic detecting dysplastic epithelium tissue

IT Proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Amphiphilic; improved diagnostic method for detecting dysplastic epithelial tissue)

IT **Epithelium**
(**Dysplastic**; improved diagnostic method for detecting **dysplastic** epithelial tissue)

IT Dyes
(Mitochondrial Marking; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Solvents
(Pharmacol. acceptable; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Diagnosis
(cancer; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Animal tissue
Cell
Composition
Extracellular matrix
Mitochondria
Solutions
Staining, biological
Stains, biological
Triticum aestivum
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Fibronectins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Albumins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Caseins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Globulins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Glutenins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Glutens
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Prolamins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Proteins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

IT Washing
(rinsing; improved diagnostic method for detecting dysplastic epithelial tissue)

IT Albumins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(serum; improved diagnostic method for detecting dysplastic epithelial tissue)

IT 64-17-5, Ethyl alcohol, biological studies 64-19-7, Acetic acid,

biological studies 81-88-9 81-93-6, Phenosafranin 92-31-9, Toluidine blue 92-32-0, Pyronine Y 97-26-7, Toluylene Blue 134-01-0, Peonidin 136-16-3, Oxythiamine 144-12-7, Tiemonium iodide 531-55-5, Azure B 531-57-7, Azure C 532-32-1, Sodium benzoate 569-64-2, Malachite Green 633-03-4, Brilliant Green 5118-17-2, Furazolium chloride 6131-90-4, Sodium acetate trihydrate 7722-84-1, Hydrogen peroxide, biological studies 7732-18-5, Water, biological studies 12040-44-7, Alcian Blue 58337-35-2, Elliptinium acetate 65589-70-0, Acriflavine 86090-24-6, Brilliant Cresyl Blue 388078-25-9, IFF Raspberry IC563457
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(improved diagnostic method for detecting dysplastic epithelial tissue)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Burkett; US 6086852 A 2000 HCAPLUS
(2) Mashberg; US 4321251 A 1982 HCAPLUS
(3) Pomerantz; US 5882627 A 1999 HCAPLUS

L11 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:31738 HCAPLUS
DN 136:98823
ED Entered STN: 11 Jan 2002
TI Methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N003-00
ICS G01N029-00
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002003048	A1	20020110	WO 2000-US18161	20000630
	WO 2002003048	C1	20020725		
	W: AT, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NO, NZ, PL, RO, SG, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 2002035549	A5	20020422	AU 2002-35549	20000630
	EP 1212600	A1	20020612	EP 2000-948557	20000630
	R: BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	BR 2000013635	A	20020730	BR 2000-13635	20000630
	JP 2004502704	T2	20040129	JP 2002-508061	20000630
	NO 2002000959	A	20020424	NO 2002-959	20020227
PRAI	WO 2000-US18161	A	20000630		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002003048	ICM	G01N003-00
	ICS	G01N029-00
JP 2004502704	FTERM	4B063/QA19; 4B063/QQ02; 4B063/QQ08; 4B063/QR66; 4B063/QS36; 4B063/QX02; 4C085/HH13; 4C085/JJ02; 4C085/KB56; 4C085/KB57; 4C085/LL18

AB Methylene blue dye compns. and methods for detecting and/or delineating cancerous and precancerous epithelial tissue are presented.

ST methylene blue diagnostic agent detection epithelium cancer
IT Solvents
(Pharmaceutically acceptable aqueous; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Diagnosis
(agents; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Diagnosis
(cancer; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Neoplasm
(epithelial; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Carcinoma
Composition
Dyes

Epithelium
Oxidizing agents
Stains, biological
(methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Washing
(rinsing; methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT 61-73-4, Methylene blue 64-17-5, Ethyl Alcohol, biological studies 64-19-7, Acetic Acid, biological studies 92-31-9, Toluidine blue o 532-32-1, Sodium benzoate 613-11-6, Leuco Methylene blue 6131-90-4, Sodium Acetate Trihydrate 7722-84-1, Hydrogen Peroxide, biological studies 7732-18-5, Water, biological studies 388078-25-9, IFF Raspberry IC 563457
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(methylene blue diagnostic agent and diagnostic methods for detection of epithelial cancer)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bacus; US 5485527 A 1996
(2) Joshi; WO 9908528 A1 1999 HCAPLUS
(3) Pomerantz; US 5882627 A 1999 HCAPLUS
(4) Stephen; US 5301688 A 1994

L11 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:31288 HCAPLUS
DN 136:98847
ED Entered STN: 11 Jan 2002
TI Rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K049-00
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002002149	A1	20020110	WO 2000-US18126	20000630
	W: AT, AU, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NO, NZ, PL, RO, SG, SK, TR, UA, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1294408	A1	20030326	EP 2000-946949	20000630
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, RO, CY				
	JP 2004501982	T2	20040122	JP 2002-506770	20000630
	NZ 517445	A	20040326	NZ 2000-517445	20000630
	NO 2002000958	A	20020424	NO 2002-958	20020227
PRAI	WO 2000-US18126	W	20000630		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002002149	ICM	A61K049-00
JP 2004501982	FTERM	4C085/HH13; 4C085/KB55; 4C085/KB57; 4C085/LL18

AB Rhodamine dye compns. and methods for detecting and/or delineating cancerous and precancerous epithelial tissue.
ST rhodamine diagnostic agent detection epithelium cancer
IT Solvents
(Pharmaceutically acceptable aqueous; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Diagnosis
(agents; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Diagnosis
(cancer; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT Neoplasm
(epithelial; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT **Epithelium**

(lesions; rhodamine diagnostic agent and diagnostic methods for detection of epithelial **cancer**)
IT Carcinoma
Color
Composition
Drugs
Epithelium
Mixing
Oxidizing agents
Stains, biological
(rhodamine diagnostic agent and diagnostic methods for detection of epithelial **cancer**)
IT Washing
(rinsing; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT 13558-31-1
RL: DGN (Diagnostic use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(leuco; rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
IT 64-17-5, Ethyl Alcohol, biological studies 64-19-7, Acetic Acid, biological studies 92-31-9, Toluidine blue o 532-32-1, Sodium benzoate 6131-90-4, Sodium Acetate Trihydrate 7722-84-1, Hydrogen Peroxide, biological studies 7732-18-5, Water, biological studies 388078-25-9, IFF Raspberry IC 563457
RL: BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(rhodamine diagnostic agent and diagnostic methods for detection of epithelial cancer)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Iype; Cancer Research 1985, V45, P2184 HCAPLUS
(2) Shishido; US 5618831 A 1997 HCAPLUS

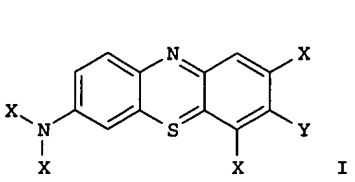
L11 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:564838 HCAPLUS
DN 135:134287
ED Entered STN: 03 Aug 2001
TI In vivo stain compounds and methods of use to identify dysplastic tissue
IN **Burkett, Douglas D.**
PA **Zila**, Inc., USA
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-5415
ICS C07D279-36
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001054696	A1	20010802	WO 2000-US2602	20000131
	W: AU, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NO, PL, SG, SK, TR, US, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1165087	A1	20020102	EP 2000-915730	20000131
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 2000009427	A	20020716	BR 2000-9427	20000131
	JP 2003520816	T2	20030708	JP 2001-554680	20000131
	ZA 2001007818	A	20020923	ZA 2001-7818	20010921
	NO 2001004720	A	20011127	NO 2001-4720	20010928
PRAI	WO 2000-US2602	W	20000131		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001054696	ICM	A61K031-5415
	ICS	C07D279-36

OS MARPAT 135:134287
GI



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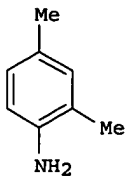

II

AB Compds. having the structural formula I wherein X is hydrogen, Me, or Y; Y is -NH-R or hydrogen; and R is Me or formula II are useful as in vivo stains for the detection of dysplastic tissue.

ST stain compd dysplastic tissue

IT Chemical formula
Composition
Epithelium
Stains, biological
(In vivo stain compds. and methods of use to identify **dysplastic** tissue)

IT Animal tissue
(dysplastic; In vivo stain compds. and methods of use to identify dysplastic tissue)

IT 47078-64-8P 352005-59-5DP, derivs. 352005-60-8P 352005-61-9P 352005-62-0P 352005-63-1P 352005-65-3P
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(In vivo stain compds. and methods of use to identify dysplastic tissue)

IT 95-53-4, o-Toluidine, reactions 99-98-9, N,N-Dimethyl-1,4-phenylenediamine 7646-85-7, Zinc Chloride, reactions 7758-99-8, Copper Sulfate Pentahydrate 7778-50-9, Potassium Dichromate 10102-17-7, Sodium Thiosulfate Pentahydrate 16828-11-8, Aluminum Sulfate Hexadecahydrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(In vivo stain compds. and methods of use to identify dysplastic tissue)

IT 43035-11-6P 352005-64-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(In vivo stain compds. and methods of use to identify dysplastic tissue)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Jiao; Talanta, CAPLUS 1999:227432 1999, V48(5), P1095 HCAPLUS
(2) Kishida Kagaku Kk; JP 63187154 A 1988 HCAPLUS
(3) Mashberg; US 4321251 A 1982 HCAPLUS

=> d all l46 tot

L46 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:532004 HCAPLUS

DN 137:57553

ED Entered STN: 17 Jul 2002

TI Method for treating cancer, visualizing cell structures, and isolating organelles using organelle crystallizing agents

IN Kong, Qingzhong

PA USA

SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2

DT Patent

LA English

IC C12Q001-00

CC 1-6 (Pharmacology)
Section cross-reference(s): 8, 9, 13, 14, 15, 63

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001082780	A2	20011108	WO 2001-US13730	20010427 <--
	WO 2001082780	A3	20020124		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,

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            YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG,
             KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
             GW, ML, MR, NE, SN, TD, TG
     CN 1275404            A     20001206    CN 2000-111092          20000429 <--
     US 6376525            B1    20020423    US 2000-663559          20000915 <--
     US 6368818            B1    20020409    US 2000-687342          20001012 <--
     CN 1299876            A     20010620    CN 2000-129316          20001113 <--
     CN 1112447            B     20030625
     EP 1294922            A2    20030326    EP 2001-930891          20010427 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     US 2002086345         A1    20020704    US 2001-25272           20011218 <--
PRAI CN 2000-111092        A     20000429  <--
     US 2000-663559        A     20000915  <--
     US 2000-687342        A     20001012  <--
     CN 2000-129316        A     20001113  <--
     WO 2001-US13730       W     20010427
CLASS
 PATENT NO.       CLASS  PATENT FAMILY CLASSIFICATION CODES
 ---------------  -----  ----------------------------------------------------
 WO 2001082780    IC     C12Q001-00
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AB This invention provides methods for (i) visualizing cellular organelles, (ii) isolating cellular organelles, (iii) and detecting dehydrogenase inhibitors by using organelle and/or cytoskeleton crystallizing agents, e.g. tetrazolium violet, (iv) treating cancer in mammals through cellular-organelle-crystallization-induced-death (herein defined as "Cocid"), (v) treating cancer using Cocid-inducing agents, pharmaceutical compns. containing a therapeutically effective amount of Cocid-inducing agents, and compns. containing Cocid-inducing agents in combination with a pharmaceutically acceptable carrier, diluent or excipient. The Cocid-inducing agents, with or without a pharmaceutically acceptable carrier, diluent or excipient, are used in combination with surgery and/or non-surgical antitumor treatments, such as radiotherapy, hyperthermia, hormone therapy, gene therapy, immunotherapy, etc. For example, crystallizing agents and various chemotherapeutic agents were tested, individually and in combination, on 9 L gliosarcoma tumor cells. Treatment was administered one day after the cells were seeded in a well plate, with the number of cells counted in 6 h. MTT at 10 .mu.g/mL was tested with cisplatin and BCNU. MTT at this dose significantly ($p < 0.005$) enhanced the cytotoxic effects of cisplatin (10 .mu.g/mL) and BCNU (25 .mu.g/mL). It was shown that the crystallizing agent and chemotherapeutic agents are effective in inhibiting tumor cell growth when applied individually. However, the combination of crystallizing agent and chemotherapeutic agents is demonstrated to be synergistic.

ST organelle cytoskeleton crystn antitumor cell structure staining; dehydrogenase inhibitor screening organelle crystn agent

IT Microfilament
(actin filament; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Sarcoma
(carcinosarcoma; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cellular; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Organelle
(centriole; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Organelle
(centrosome; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Organelle
(contractile ring; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Disease, animal
(degenerative; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, isolating organelles and studying cell regulation)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(editing; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, isolating organelles and studying cell regulation)

IT Cell nucleus

(envelope; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Reduction
(enzymic; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Neuroglia, neoplasm
(gliosarcoma; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Drug delivery systems
(implants; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Yeast
(infection; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Cytoskeleton
(intermediate filament; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Polyesters, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lactic acid-based, implants; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Cell nucleus
(lamina; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Cell nucleus
(membrane; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Organelle
(mitotic spindle; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Membrane, biological
(nuclear; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Cell death
(organelle crystallization-induced; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)
IT Angiogenesis inhibitors
Chemotherapy
Electric field
Gene therapy
Hyperthermia (therapeutic)
Immunotherapy
Ischemia
Laser radiation
Photodynamic therapy
Radiotherapy
Reperfusion
Sound and Ultrasound
Surgery
(organelle/cytoskeleton crystallization agents for treating cancer in combination with other surgical and non-surgical therapies)
IT Animal cell
Animal tissue
Anti-infective agents
Antibacterial agents
Antitumor agents
Antiviral agents
Carcinoma
Cell membrane
Cell nucleus
Centromeres
Chromatin
Chromosome
Cilia
Crystallization
Cytoskeleton
Drug screening
Embryophyta
Endoplasmic reticulum
Endosome
Eubacteria
Flagella
Fungi
Fungicides
Golgi apparatus
Kinetochores

Leukemia
Lymphoma
Lysosome
Mammalia
Microfilament
Microtubule
Microvillus
Mitochondria
Nucleosome
Organelle
Parasite
Parasiticides
Peroxisome
Ribosome
Sarcoma
Staining, biological
Telomeres (chromosome)
(organelle/cytoskeleton crystallization agents for treating **cancer**, visualizing cell structures, and isolating organelles)

IT **Proteins**
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Aging, animal
Apoptosis
Autoimmune disease
Biological transport
Cell cycle
Cell migration
Development, mammalian postnatal
Signal transduction, biological
Transformation, neoplastic
(organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, isolating organelles and studying cell regulation)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, isolating organelles and studying cell regulation)

IT **Proteins**
RL: ANT (Analyte); PUR (Purification or recovery); ANST (Analytical study); PREP (Preparation)
(pericentrins; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Organelle
(phagosome; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Cell nucleus
(pore complex; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Lung, neoplasm
(small-cell carcinoma; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Drug interactions
(synergistic; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT Hormones, animal, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(therapy; organelle/cytoskeleton crystallization agents for treating cancer in combination with other surgical and non-surgical therapies)

IT 9035-82-9, Dehydrogenase
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gene therapy and inhibitors; organelle/cytoskeleton crystallization agents for treating cancer in combination with other surgical and non-surgical therapies)

IT 7782-44-7, Oxygen, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hyperbaric, therapy; organelle/cytoskeleton crystallization agents for treating cancer in combination with other surgical and non-surgical therapies)

IT 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26100-51-6, Poly(lactic acid)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(implants; organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT 146-68-9 146-68-9 288-94-8, (1H)-Tetrazole 298-83-9, p-Nitro Blue Tetrazolium Chloride 298-83-9 298-93-1, Thiazolyl Blue 298-93-1D, MTT, analogs 298-95-3, Neotetrazolium chloride 298-96-4, Tetrazolium Red 298-96-4 1096-80-6 1184-43-6, Tetranitroblue tetrazolium chloride 1719-71-7, Tetrazolium violet 1719-71-7D, Tetrazolium violet, analogs 1871-22-3, Blue Tetrazolium Chloride 3773-47-5, m-Nitro Neotetrazolium Chloride 20829-03-2 25413-85-8 34062-23-2 36889-43-7 38116-89-1, 2-(2'-Benzothiazolyl)-5-styryl-3-(4'-phthalhydrazidyl)tetrazolium chloride 56576-93-3, Piperonyltetrazolium blue 71658-33-8, p-Tolyl Tetrazolium Red 90217-02-0 113090-52-1, o-Tolyl Tetrazolium Red 117038-70-7 127615-60-5, m-Nitro Blue Tetrazolium Chloride 127615-61-6, p-Anisyl Blue Tetrazolium Chloride 127615-64-9, p-Anisyl-p-Nitro Blue Tetrazolium Chloride 127615-65-0, Veratryl Tetrazolium Blue 138169-43-4 193422-25-2 402789-90-6 413585-66-7
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT 140879-24-9, Proteasome
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

IT 154-93-8, BCNU 15663-27-1, Cisplatin
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(organelle/cytoskeleton crystallization agents for treating cancer, visualizing cell structures, and isolating organelles)

L46 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:176618 HCAPLUS
DN 132:331635
ED Entered STN: 19 Mar 2000
TI An approach to proteomic analysis of human tumors
AU Emmert-Buck, Michael R.; Gillespie, John W.; Paweletz, Cloud P.; Ornstein, David K.; Basrur, Venkatesha; Appella, Ettore; Wang, Quan-Hong; Huang, Jing; Hu, Nan; Taylor, Phil; Petricoin, Emanuel F., III
CS Pathogenetics Unit, Laboratory of Pathology, Cancer Genome Anatomy Project, Office of the Director, National Cancer Institute, Bethesda, MD, USA
SO Molecular Carcinogenesis (2000), 27(3), 158-165
CODEN: MOCAE8; ISSN: 0899-1987
PB Wiley-Liss, Inc.
DT Journal
LA English
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 14
AB A strategy for proteomic anal. of microdissected cells derived from human tumor specimens is described and demonstrated by using esophageal cancer as an example. Normal squamous epithelium and corresponding tumor cells from two patients were procured by laser-capture microdissection and studied by two-dimensional PAGE (2D-PAGE). Fifty thousand cells resolved approx. 675 distinct proteins (or isoforms) with mol. wts. ranging between 10 and 200 kDa and isoelec. points of pH 3-10. Comparison of the microdissected protein profiles showed a high degree of similarity between the matched normal-tumor samples (98% identical). However, 17 proteins showed tumor-specific alterations, including 10 that were uniquely present in the tumors and seven that were observed only in the normal epithelium. Two of the altered proteins were characterized by mass spectrometry and immunoblot anal. and were identified as cytokeratin 1 and annexin I. Acquisition of 2D-PAGE protein profiles, visualization of disregulated proteins, and subsequent determination of the identity of selected proteins through high-sensitivity MS-MS microsequencing are possible from microdissected cell populations. These separation and anal. techniques are uniquely capable of detecting tumor-specific alterations. Continued refinement of techniques and methodologies to determine the abundance and status of proteins in vivo holds great promise for future study of normal cells and associated neoplasms.
ST proteomic analysis tumor esophagus mass spectrometry electrophoresis immunoblotting; tumor cell esophagus cytokeratin annexin tubulin
IT Annexins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(I; approach to proteomic anal. of human tumors)

IT **Epithelium**
Mass spectrometry
Staining, biological
Tandem mass spectrometry
(approach to proteomic anal. of human **tumors**)
IT Keratins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(cytokeratin 1; approach to proteomic anal. of human tumors)
IT Immunoassay
(immunoblotting; approach to proteomic anal. of human tumors)
IT Esophagus
(neoplasm; approach to proteomic anal. of human tumors)
IT Electrophoresis
(two-dimensional; approach to proteomic anal. of human tumors)
IT Tubulins
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(.alpha.-; approach to proteomic anal. of human tumors)
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD.
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L46 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:621138 HCAPLUS
DN 132:177665
ED Entered STN: 29 Sep 1999
TI A double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochemistry
AU Nishikawa, Tetsunari; Arai, Shoichi; Uobe, Kenichi; Wato, Masahiro; Tominaga, Kazuya; Masuno, Kazuya; Mori, Masahiko; Yoshida, Seiko; Kobayashi, Hideki; Tanaka, Akio
CS Department of Oral Pathology Osaka Dental University 8-1, Hirakata, 573-1121, Japan
SO Acta Histochemica et Cytochemica (1999), 32(4), 327-332
CODEN: ACHCBO; ISSN: 0044-5991
PB Japan Society of Histochemistry and Cytochemistry
DT Journal

LA English
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 6, 13, 14
AB Proliferative and aberrant cellular activities of human tissues were evaluated using a novel double staining technique for histone H3 (with in situ hybridization) and immunohistochem. for p53 protein. Simultaneous analyses were run on tissue sections of papillomas, squamous cell carcinomas (SCC) and normal non-neoplastic stratified squamous epithelia from human oral specimens using formalin-fixed, paraffin-embedded material. Sections were first FITC-labeled histone H3 DNA probe and then treated with alkaline phosphatase-conjugated anti-FITC rabbit antibody. Following reaction with anti-p53 protein mouse monoclonal antibody using the labeled streptavidin-biotin (LSAB) method, sections were stained with 3-amino-9-ethylcarbazole-HCl to detect p53 protein, and with 5-bromo-4-chloro-3-indoxy phosphate/nitro blue tetrazolium to detect histone H3 mRNA. Several methods differing only in the order of detection procedures were employed and subsequently compared. Using these methods, histone H3 mRNA and p53 protein were detected both within the cytoplasm and the nucleus, resp. Histone H3 mRNA and p53 protein were expressed in larger cell populations in the following order: SCC, papilloma, and non-neoplastic stratified squamous epithelia. The double staining as employed here proved effective for simultaneous evaluation of cell proliferative activity as well as the overexpression of aberrant gene on the same tissue sections.
ST histone H3 mRNA p53 in situ hybridization immunohistochem human; mouth tumor histone H3 mRNA p53 hybridization immunohistochem human
IT Histones
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(H3; double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT Papilloma
Staining, biological
(double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT p53 (**protein**)
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT mRNA
RL: ANT (Analyte); BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(histone H3; double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT Immunoassay
(immunohistochem.; double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT Nucleic acid hybridization
(in situ; double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT Mouth
Tongue
(neoplasm; double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT Carcinoma
(squamous cell; double staining method for histone H3 mRNA and p53 protein in oral tumors using in situ hybridization and immunohistochem.)
IT **Epithelium**
(squamous, normal non-**neoplastic** stratified; double staining method for histone H3 mRNA and p53 protein in oral **tumors** using in situ hybridization and immunohistochem.)
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L46 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:575072 HCAPLUS
DN 123:28753
ED Entered STN: 26 May 1995
TI Histochemical method for discrimination of mesothelioma and pulmonary adenocarcinoma by hyaluronic acid binding protein (HABP)
AU Uzuki, Miwa; Ichinohasama, Ryo; Saito, Yasuki; Sawai, Takashi
CS Sch. Med., Tohoku Univ., Sendai, 980-77, Japan
SO Byori to Rinsho (**1995**), 13(5), 741-7
CODEN: BYRIEM; ISSN: 0287-3745
DT Journal
LA Japanese
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 14
AB Staining by hyaluronic acid binding protein (HABP) was better than Alcian blue staining for differential diagnosis of mesothelioma from pulmonary adenocarcinoma. The cell membrane and cytoplasm of mesothelioma were pos. for HABP staining irresp. to the cell types of epithelial, sarcomatous, and mixed. Alcian blue staining gave neg. results in some mesothelioma cases. Pulmonary adenocarcinoma was pos. for HABP only in 1/11. Interstitial cells were pos. in mesothelioma and pulmonary adenocarcinoma.
ST mesothelioma lung adenocarcinoma discrimination method; hyaluronate binding protein staining cancer discrimination
IT **Staining, biological**
(discrimination of mesothelioma and pulmonary adenocarcinoma by staining using hyaluronate-binding protein)
IT Lung, neoplasm
(adenocarcinoma, discrimination of mesothelioma and pulmonary adenocarcinoma by staining using hyaluronate-binding protein)
IT **Proteins**, specific or class
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(hyaluronate-binding, discrimination of mesothelioma and pulmonary adenocarcinoma by staining using hyaluronate-binding protein)
IT **Mesothelium**
(**neoplasm, mesothelioma**, discrimination of **mesothelioma** and pulmonary **adenocarcinoma** by staining using hyaluronate-binding protein)
IT 9004-61-9, Hyaluronic acid
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(discrimination of mesothelioma and pulmonary adenocarcinoma by staining using hyaluronate-binding protein)

L46 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:128782 HCAPLUS
DN 120:128782
ED Entered STN: 19 Mar 1994
TI Identification of growth inhibited cells by retention of a lipophilic fluorescent dye
AU Boyd, Frederick T.

CS Dep. Lab. Med. Pathol., Univ. Minnesota, Minneapolis, MN, 55455, USA
SO Cell Growth & Differentiation (1993), 4(9), 777-84
CODEN: CGDIE7; ISSN: 1044-9523
DT Journal
LA English
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 13
AB Cellular proliferation is regulated in both pos. and neg. ways. However, direct selection for growth inhibitory control elements is limited by the difficulty in identifying a growth inhibited cell against a background of cells which are proliferating. This study describes a pos. selection technique for growth inhibited cells. This method is based on the retention of a lipophilic fluorescent dye which nonspecifically labels plasma membranes and distributes between daughter cells with membrane lipid as cells proliferate. Characterization of this assay is described using an epithelial cell line which is growth inhibited in response to transforming growth factor .beta. (TGF-.beta.) and dexamethasone and several mutant clones of that line which lack responsiveness to TGF-.beta.. Retention of dye in response to the growth inhibitors is proportional to the inhibition of thymidine incorporation of those cells. Mixing expts. were also carried out in which G418 resistant TGF-.beta. responsive epithelial cells were mixed with TGF-.beta. nonresponsive mutants. The mixture was labeled with PKH-2 and exposed to TGF-.beta. for 3 days. Subsequently, consecutive fractions of cells sorted on the basis of fluorescence intensity were selected in G418, and the TGF-.beta. responsive epithelial cells were found predominantly in the most fluorescent cells in the population. This method provides a pos. selection for growth inhibited cells which may, in combination with classical gene transfer techniques, provide a way to select for growth inhibitory genes in a manner analogous to the focus forming assay selection for oncogenes.
ST cell proliferation inhibition lipophilic fluorescent dye; staining cell proliferation inhibition fluorescent dye
IT **Epithelium**
(inhibition of **proliferation** of, lipophilic fluorescent dye as stain for)
IT Cell proliferation
(inhibition of, lipophilic fluorescent dye staining for detection of)
IT **Staining, biological**
(fluorescent, for cell proliferation inhibition using lipophilic fluorescent dye)
IT 145687-07-6, PKH-2
RL: ANST (Analytical study)
(as stain for detection of cell proliferation inhibition)

L46 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:208976 HCAPLUS
DN 118:208976
ED Entered STN: 29 May 1993
TI Detection of malignant and pre-malignant conditions of the cervix
IN Jonas, Sonja Karin; Slater, Trevor F.
PA Slater, Hazel, UK; Brunel University
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N033-50
ICS G01N001-30; C12Q001-48
CC 9-2 (Biochemical Methods)
Section cross-reference(s): 14
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9306485	A1	19930401	WO 1992-GB1768	19920925 <--
	W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
	AU 9226445	A1	19930427	AU 1992-26445	19920925 <--
	AU 667326	B2	19960321		
	JP 07502112	T2	19950302	JP 1992-505939	19920925 <--
	EP 641437	A1	19950308	EP 1992-919975	19920925 <--
	EP 641437	B1	19981118		
	R: BE, CH, DE, FR, GB, IE, IT, LI, LU				
	US 6051393	A	20000418	US 1994-314923	19940929 <--
PRAI	GB 1991-20633		19910927 <--		

WO 1992-GB1768 19920925 <--
US 1994-219771 19940329 <--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9306485	ICM	G01N033-50
	ICS	G01N001-30; C12Q001-48

AB A method is disclosed for testing for a malignant or premalignant condition of the cervix by examination of a cervical cell sample. The test is performed on a fraction of the sample consisting predominantly of epithelial cells which have been separated by a buoyant d. method, e.g. discontinuous d.-gradient centrifugation. Following separation of the epithelial cells, the cells are tested for an abnormal level of an enzyme associated with proliferating cells. Typically, the enzyme tested for is a pentose phosphate shunt enzyme, ornithine decarboxylase, thymidine kinase, glucose-6-phosphate dehydrogenase (G6PD), etc. Epithelial cell separation using a Percoll gradient is described, as are cytochem. determination of 6-phosphogluconate dehydrogenase in whole cells and biochem. determination of G6PD in lysed cells. Values are reported for normal individuals and for individuals with grades 1-3 intraepithelial neoplasia and with invasive carcinoma. An enzyme ratio method (using detns. of activity for G6PD and catalase) is described. Effects of storage conditions on enzyme activity are also reported.

ST cervix epithelial cell gradient centrifugation; cancer cervix diagnosis epithelium enzyme

IT Enzymes
RL: ANST (Analytical study)
(cell proliferation-associated, determination of, in separated cervical epithelial cells for cervix (pre)cancer diagnosis)

IT Cell proliferation
(enzymes associated with, determination of, in separated cervical epithelial cells for cervix (pre)cancer diagnosis)

IT Electron acceptors
(in cervix (pre)cancer diagnosis with cell proliferation-associated enzyme determination in separated cervical epithelial cells)

IT Histochemistry
Spectrochemical analysis
Staining, biological
(in cervix (pre)cancer diagnosis with separated cervical epithelial cells)

IT Analysis
(biochem., in cervix (pre)cancer diagnosis with separated cervical epithelial cells)

IT Uterus, neoplasm
(cervix, diagnosis of, epithelial cell separation and enzyme determination for)

IT Uterus, neoplasm
(cervix, carcinoma, invasive, diagnosis of, with cell proliferation-associated enzyme determination in separated cervical epithelial cells)

IT Uterus
(cervix, epithelium, separation by buoyant d. method of cells of, for enzyme marker determination for cervix (pre)neoplasm diagnosis)

IT Uterus, neoplasm
(cervix, intraepithelial neoplasia, diagnosis of, with cell proliferation-associated enzyme determination in separated cervical epithelial cells)

IT Centrifugation
(d.-gradient, in cervix epithelial cell separation, for cervix (pre)cancer diagnosis)

IT Cytometry
(flow, in cervix (pre)cancer diagnosis with separated cervical epithelial cells)

IT **Epithelium**
(squamous, cervical, for enzyme marker determination for cervix (pre) **neoplasm** diagnosis)

IT 9001-05-2, Catalase 9002-17-9, Xanthine oxidase
RL: ANST (Analytical study)
(determination of cell proliferation-associated enzyme and, in separated cervical epithelial cells for cervix (pre)cancer diagnosis)

IT 9001-40-5, Glucose-6-phosphate dehydrogenase 9001-82-5, 6-Phosphogluconate dehydrogenase 9002-06-6, Thymidine kinase 9024-60-6, Ornithine decarboxylase 9040-57-7, Ribonucleotide reductase
RL: ANT (Analyte); ANST (Analytical study)
(determination of, in separated cervical epithelial cells for cervix (pre)cancer diagnosis)

IT 67-68-5, DMSO, biological studies 7727-37-9, Nitrogen, biological studies
RL: BIOL (Biological study)
(enzyme activity in cervical sample storage in presence of)

IT 53-59-8, NADP 56-73-5, Glucose-6-phosphate 298-83-9, Nitroblue-tetrazolium 299-11-6 921-62-0 956-48-9
RL: ANST (Analytical study)
(in cervix (pre)cancer diagnosis with cell proliferation-associated enzyme determination in separated cervical epithelial cells)
IT 25702-74-3, Ficoll 65455-52-9, Percoll
RL: ANST (Analytical study)
(in cervix epithelial cell separation by d.-gradient centrifugation, for cervix (pre)cancer diagnosis)

L46 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1980:142750 HCAPLUS
DN 92:142750
ED Entered STN: 12 May 1984
TI Staining of acid mucopolysaccharides appearing on and in various cell types by 4',6'-diamidino-2-phenylindole (DAPI)
AU Grossgebauer, K.
CS Inst. Med. Microbiol., Free Univ. Berlin, D-1000/45, Fed. Rep. Ger.
SO Microscopica Acta (1979), 82(3), 291-3
CODEN: MSACCU; ISSN: 0044-376X
DT Journal
LA English
CC 9-6 (Biochemical Methods)
AB DAPI can stain various types of acid mucopolysaccharides, e.g. heparin and agar mucopolysaccharides. Due to their heparin content, mast cells and basophil cells were also stained rapidly. Other cells, e.g. mononuclear phagocytes and malignant epithelial cells, were stained by DAPI after pretreatment with acid mucopolysaccharides or heparin. The pretreated cells showed bright yellow fluorescence.
ST fluorescence staining acid mucopolysaccharide; diamidinophenylindole cell fluorescence
IT Basophil
Mast cell
(mucopolysaccharides of, staining of, by diamidinophenylindole)
IT Cell membrane
(staining of, fluorescent, by diamidinophenylindole)
IT Mucopolysaccharides, analysis
RL: ANST (Analytical study)
(acid, staining of, fluorescent, in cells by diamidinophenylindole)
IT Microscopy
(fluorescence, of acid mucopolysaccharides of cells)
IT **Staining, biological**
(fluorescent, of acid mucopolysaccharides of cells, by diamidinophenylindole)
IT Phagocyte
(mononuclear, mucopolysaccharides of, staining of, by diamidinophenylindole)
IT **Epithelium**
(**neoplasm**, mucopolysaccharides of, staining of, by diamidinophenylindole)
IT 47165-04-8
RL: ANST (Analytical study)
(staining by, fluorescent, of acid mucopolysaccharides)
IT 9005-49-6, analysis
RL: ANST (Analytical study)
(staining of, fluorescent, in cells by diamidinophenylindole)

L46 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1973:502323 HCAPLUS
DN 79:102323
ED Entered STN: 12 May 1984
TI Comparative microspectrophotometric study of the DNA content in the diagnosis of pretumorous processes and cancer
AU Avtandilov, G. G.; Kazantseva, I. A.
CS Cent. Pathoanat. Lab., Inst. Hum. Morphol., Moscow, USSR
SO Virchows Archiv [Abteilung] A: Pathologische Anatomie (1973), 359(4), 289-97
CODEN: VAAPB7; ISSN: 0042-6423
DT Journal
LA English
CC 9-6 (Biochemical Methods)
AB A comparative microspectrometric study of the nuclear Feulgen DNA content of various types of epithelial tissue (multi-layer flat epithelium of the larynx, glandular epithelium of the large intestine, and endometrium) in different forms of dysplasia, hyperplasia, and tumorous growth was made by using histol. slices of biopsy material (66 biopsies from 62 patients).

The study showed that different forms of pretumorous and tumorous transformation of epithelial tissues are marked by definite shifts in the nuclear Feulgen DNA content and revealed different levels of their cellular polyploidy and genetic heterogeneity. These levels attest to the beginning of tissue malignization and can be used as an objective diagnostic test.

ST cancer epithelium DNA staining; spectrometry DNA epithelium cancer

IT Cancer
(DNA Feulgen staining in epithelium in diagnosis of)

IT **Epithelium**
(Feulgen DNA staining in, in **cancer** and **pretumor** diagnosis)

IT Cell nucleus
(Feulgen DNA staining of, in cancer and pretumor diagnosis)

IT Deoxyribonucleic acids
RL: PROC (Process)
(Feulgen staining of, in epithelium in cancer and pretumor diagnosis)

IT **Staining, biological**
(Feulgen, for DNA in epithelium, in cancer and pretumorous processes diagnosis)

=> b medl
FILE 'MEDLINE' ENTERED AT 16:41:11 ON 15 OCT 2004

FILE LAST UPDATED: 14 OCT 2004 (20041014/UP). FILE COVERS 1951 TO DATE.

On February 29, 2004, the 2004 MeSH terms were loaded. See HELP RLOAD for details. OLDMEDLINE now back to 1951.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2004 vocabulary. See http://www.nlm.nih.gov/mesh/ and http://www.nlm.nih.gov/pubs/techbull/nd03/nd03_mesh.html for a description of changes.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all l33 tot

L33 ANSWER 1 OF 4 MEDLINE on STN
AN 73251364 MEDLINE
DN PubMed ID: 4125877
TI An ultrastructural study of the nature and origin of the Brenner tumour of the ovary.
AU Cummins P A; Fox H; Langley F A
SO Journal of pathology, (**1973 Jun**) 110 (2) 167-76.
Journal code: 0204634. ISSN: 0022-3417.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197311
ED Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19731112
CT Check Tags: Female; Human
Basement Membrane
Bladder: PA, pathology
Bladder Neoplasms: PA, pathology
Brenner Tumor: ET, etiology
***Brenner Tumor: PA, pathology**
Cell Nucleus
Collagen
Epithelium: PA, pathology
Extracellular Space
Golgi Apparatus
Lysosomes
Metaplasia: PA, pathology
Microscopy, Electron
Mitochondria
***Ovarian Neoplasms: PA, pathology**
Ovary: PA, pathology
Papilloma: PA, pathology
Ribosomes
Staining and Labeling

RN 9007-34-5 (Collagen)

L33 ANSWER 2 OF 4 MEDLINE on STN
AN 72160392 MEDLINE
DN PubMed ID: 4111809
TI Electron microscopic studies on reactive changes of the trabecular meshwork in human eyes after microsurgery.
AU Lutjen-Drecoll E
SO Albrecht von Graefes Archiv fur klinische und experimentelle Ophthalmologie. Albrecht von Graefe's archive for clinical and experimental ophthalmology, (1972) 183 (4) 267-85.
Journal code: 0044637. ISSN: 0065-6100.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197206
ED Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19720622
CT Check Tags: Human
*Anterior Chamber: PA, pathology
Anterior Chamber: SU, surgery
Basement Membrane
Blood Platelets
Capillaries: PA, pathology
Cell Nucleolus
Cell Nucleus
Choroid Neoplasms: SU, surgery
*Ciliary Body: PA, pathology
Ciliary Body: SU, surgery
Collagen
Cytoplasm
Cytoplasmic Granules
Endoplasmic Reticulum
Epithelium: PA, pathology
Fibrin
Fibroblasts
*Glaucoma: SU, surgery
Hyalin: AN, analysis
Macrophages
Melanoma: SU, surgery
Microscopy, Electron
Microsurgery
Mitochondria
Mitosis
Osmium: DU, diagnostic use
Staining and Labeling
RN 7440-04-2 (Osmium); 9001-31-4 (Fibrin); 9007-34-5 (Collagen)

L33 ANSWER 3 OF 4 MEDLINE on STN
AN 70265607 MEDLINE
DN PubMed ID: 4194902
TI Mesonephroma ovarii (hypernephroid carcinoma). Light microscopic and ultrastructural study of a case.
AU Okagaki T; Richart R M
SO Cancer, (1970 Aug) 26 (2) 453-61.
Journal code: 0374236. ISSN: 0008-543X.
CY United States
DT (CASE REPORTS)
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 197010
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19701006
CT Check Tags: Female; Human
Aged
Aminosalicylic Acids
Basement Membrane
Cell Membrane
Cell Nucleolus
Cell Nucleus
Cytoplasm
Cytoplasmic Granules

Glycogen: ME, metabolism
Golgi Apparatus
***Mesonephroma: PA, pathology**
Microscopy, Electron
Microtubules
Mitochondria
Mucins
***Ovarian Neoplasms: PA, pathology**
Ribosomes
Staining and Labeling
RN 9005-79-2 (Glycogen)
CN 0 (Aminosalicylic Acids); 0 (Mucins)

L33 ANSWER 4 OF 4 MEDLINE on STN
AN 70083918 MEDLINE
DN PubMed ID: 4188958
TI Electron microscopy of neoplasms in the lung with special emphasis on the alveolar cell carcinoma.
AU Coalson J J; Mohr J A; Pirtle J K; Dee A L; Rhoades E R
SO American review of respiratory disease, **(1970 Feb)** 101 (2) 181-97.
Journal code: 0370523. ISSN: 0003-0805.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 197003
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19700302
CT Check Tags: Female; Human; Male
***Adenocarcinoma: PA, pathology**
***Adenocarcinoma, Bronchiolo-Alveolar: PA, pathology**
Aged
Basement Membrane
Biopsy
***Carcinoid Tumor: PA, pathology**
***Carcinoma, Squamous Cell: PA, pathology**
Cell Nucleolus
Cell Nucleus
Collagen: AN, analysis
Cytoplasm
Cytoplasmic Granules
Cytosol
Endoplasmic Reticulum
*Lung: PA, pathology
***Lung Neoplasms: PA, pathology**
Membranes
Methods
Microscopy, Electron
Middle Aged
Mitochondria
Organoids
Staining and Labeling
RN 9007-34-5 (Collagen)

=> b wpix
FILE 'WPIX' ENTERED AT 16:42:12 ON 15 OCT 2004
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HIT STRUCTURES WITHIN THE BIBLIOGRAPHIC DOCUMENT <<<

=> d all l45 tot

L45 ANSWER 1 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1994-044454 [06] WPIX
DNN N1994-035220 DNC C1994-019834
TI Compsn. for confirmation of correct dilution of calibrators - contains visible marker in proportion to the amount of calibrator..
DC B04 S02 S03
IN CHIAPPETTA, M F; MEIKLEJOHN, B I; CHIAPETTA, M; MEIKLEJOHN, B
PA (HYBR-N) HYBRITECH INC
CYC 22
PI EP 582456 A2 19940209 (199406)* EN 16 G01N033-58
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
AU 9344482 A 19940210 (199411) G01N033-483 <--
CA 2101888 A 19940206 (199417) G01N033-53
JP 06258321 A 19940916 (199442) 16 G01N033-531
US 5447838 A 19950905 (199541) 17 G01N033-569
EP 582456 A3 19950412 (199544) G01N033-58
AU 670299 B 19960711 (199635) G01N033-483 <--
TW 277104 A 19960601 (199641) G01N033-68
IL 106599 A 19970415 (199726) G01N033-52
ADT EP 582456 A2 EP 1993-306116 19930803; AU 9344482 A AU 1993-44482 19930805; CA 2101888 A CA 1993-2101888 19930804; JP 06258321 A JP 1993-194759 19930805; US 5447838 A US 1992-925513 19920805; EP 582456 A3 EP 1993-306116 19930803; AU 670299 B AU 1993-44482 19930805; TW 277104 A TW 1993-106273 19930805; IL 106599 A IL 1993-106599 19930805
FDT AU 670299 B Previous Publ. AU 9344482
PRAI US 1992-925513 19920805
REP No-SR.Pub; 1.Jnl.Ref; EP 86535; US 4843021
IC ICM **G01N033-483**; G01N033-531; G01N033-569; G01N033-58; G01N033-68
ICS G01N001-00; G01N021-25; G01N033-543; G01N033-573; G01N033-574
ICA G01N033-52; G01N033-53; G01N033-533
AB EP 582456 A UPAB: 19940322
Compsn. for facilitating a determn. that a stock solution containing a dissolved calibration or control material (''calibrator'') has been diluted correctly comprises a stock solution with the following dissolved in it: (a) a calibrator designated for use in calibrators an assay for an analyte of inters (A) over a working or controlling concentration range and (b) an identifiably effective amount of a dissolved marker for identifying the diluter level of the stock solution over the working concentration range of the calibrator. (I) neither participating as a reactant nor as a label on a reactant in the assay for (A). $

Also claimed is (A) a calibrator solution for use in a test kit. (B) a diagnostic assay employing the series of calibrator solns. and (c) processes for confirming the correct dilution of a stock solns. $

(I) is a dye or cpd. which absorbs light in the visible spectrum. (I) is pref. bound to a carrier protein, e.g. bovine serum albumin, homo serum albumin or serum albumin from other animals. $

USE - A convenient method by which a mfr. of a calibrator solution can confirm the correct dilution of any calibrator solution that is made from an original stock solution is provided. This is especially useful when the calibrator material is an antigen or an antibody.

Dwg.0/0
FS CPI EPI
FA AB; DCN
MC CPI: B04-B04C; **B04-N02**; B10-A01; **B11-C07B1**; B12-K04
EPI: S02-K07; S03-E14H4

L45 ANSWER 2 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1993-330600 [42] WPIX
DNC C1993-146046
TI Chip for capturing polynucleotide - has several different complementary probes fixed on cells at different sites on single tip.
DC B04 D16
IN KAMBARA, H; OKANO, K
PA (HITA) HITACHI LTD
CYC 2

PI JP 05236997 A 19930917 (199342)* 10 C12Q001-68
US 5434049 A 19950718 (199534) 15 C12Q001-68
US 5607646 A 19970304 (199715) 15 B01L011-00
US 5817506 A 19981006 (199847) C12Q001-68
ADT JP 05236997 A JP 1992-42829 19920228; US 5434049 A US 1993-21667 19930224; US 5607646 A Cont of US 1993-21667 19930224, US 1995-410544 19950321; US 5817506 A Cont of US 1993-21667 19930224, Cont of US 1995-410544 19950321, US 1996-728785 19961010
FDT US 5607646 A Cont of US 5434049; US 5817506 A Cont of US 5434049, Cont of US 5607646
PRAI JP 1992-42829 19920228
IC ICM B01L011-00; C12Q001-68
ICS **G01N033-48**
AB JP 05236997 A UPAB: 19940126
A tip for catching a target polynucleotide (PN) is claimed in which a probe complementary to the target PN is fixed to it. Different probes for several target PNs are fixed on cells formed at different sites on a single tip.
Detection of PN involves capturing the target PN combined with a label on a carrier on which a probe complementary to the target PN is fixed, or capturing the target PN and combining it with a label. The above tip is used as the carrier to detect several target PNs.
Fractionation of PNs is also claimed in which each cell of the above tip acts also as an electrode and several target PNs are eluted by switching the electric field applied on each electrode
Dwg.0/6
FS CPI
FA AB
MC CPI: **B04-B04A1**; B11-C09; **D05-H09**; D05-H12

L45 ANSWER 3 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1993-184083 [23] WPIX
CR 1993-184082 [23]
DNN N1993-141461 DNC C1993-081463
TI Measurement of reticulocytes in whole blood - by using flow cytometry technique employing dye e.g. oxazine 750, buffer and sphering agent.
DC B02 B04 S03
IN BEN-DAVID, D; COLELLA, G M; CUPO, A; FAN, S S; FISCHER, G; ORNSTEIN, L; MARTIN, G E; COLLELA, G M
PA (MILE) MILES INC; (MOUN) MOUNT SINAI SCHOOL MEDICINE; (FARB) BAYER CORP
CYC 23
PI EP 545315 A1 19930609 (199323)* EN 29 G01N015-14
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
AU 9228167 A 19930610 (199330) G01N021-64
CA 2077789 A 19930606 (199335) C09B019-00 <--
JP 06180315 A 19940628 (199430) 20 G01N033-48 <--
US 5360739 A 19941101 (199443) 23 G01N033-48 <--
US 5411891 A 19950502 (199523) 23 G01N033-48 <--
JP 08027277 B2 19960321 (199616) 19 G01N033-48 <--
IL 103055 A 19970713 (199734) G01N033-50
CA 2077789 C 19970909 (199749) C09B019-00 <--
EP 545315 B1 19980107 (199806) EN 31 G01N015-14
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
TW 316948 A 19971001 (199806) G01N033-49
DE 69223931 E 19980212 (199812) G01N015-14
ES 2111600 T3 19980316 (199817) G01N015-14
KR 258394 B1 20000601 (200130) G01N033-50
ADT EP 545315 A1 EP 1992-120309 19921127; AU 9228167 A AU 1992-28167 19921105; CA 2077789 A CA 1992-2077789 19920909; JP 06180315 A JP 1992-350137 19921204; US 5360739 A US 1991-802585 19911205; US 5411891 A Div ex US 1991-802585 19911205, US 1992-961582 19921015; JP 08027277 B2 JP 1992-350137 19921204; IL 103055 A IL 1992-103055 19920904; CA 2077789 C CA 1992-2077789 19920909; EP 545315 B1 EP 1992-120309 19921127; TW 316948 A TW 1993-103032 19930420; DE 69223931 E DE 1992-623931 19921127, EP 1992-120309 19921127; ES 2111600 T3 EP 1992-120309 19921127; KR 258394 B1 KR 1992-23171 19921203
FDT US 5411891 A Div ex US 5360739; JP 08027277 B2 Based on JP 06180315; DE 69223931 E Based on EP 545315; ES 2111600 T3 Based on EP 545315
PRAI US 1991-802585 19911205; US 1992-961582 19921015;
US 1991-802593 19911205
REP 2.Jnl.Ref; EP 430719; EP 73554; JP 61079163
IC ICM **C09B019-00**; G01N015-14; G01N021-64; **G01N033-48**; G01N033-49; G01N033-50
ICS **C09B015-00**; **C09B067-44**; G01N001-30; G01N021-27; G01N021-49; G01N021-53; G01N033-52; G01N033-72
AB EP 545315 A UPAB: 20010603

A method for identification of subclasses of cells of interest in a blood sample by flow cytometry which comprises (a) mixing an aliquot of the blood sample with an aqs. reagent compsn. comprising a dye cpd. which stains the ribonucleic acid of cells in the subclass of interest, a buffer for maintaining a pH of 6-9 and a sphering agent; (b) passing the suspension obtd. a cell at a time through an area of focused optical illumination; (c) detecting the light scattered and light fluoresced by each cell; and (d) differentiating the cells of the subclass of interest at least in part on the basis of the scattered and fluoresced light.

USE/ADVANTAGE - The reagent compsns. can be used for the rapid and specific staining of reticulocytes. The method can be used for identifying reticulocytes and simultaneously measuring the volume, haemoglobin concentration and haemoglobin content of large numbers of individual reticulocytes and erythrocytes in a whole blood sample.

Dwg.1/6

Dwg.1/6

FS CPI EPI

FA AB; GI; DCN

MC CPI: **B04-B04A1**; B04-B04D1; B04-B04D2; B04-B04D5; B06-D11; B06-E05; **B11-C07B**; B12-K04A

EPI: S03-E04C1; S03-E04D; S03-F05C; S03-F06C

L45 ANSWER 4 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 1993-184082 [23] WPIX

CR 1993-184083 [23]

DNN N1993-141460 DNC C1993-081462

TI Identification and characterisation of reticulocytes in blood - by flow cytometry technique employing dye (e.g. oxazine 750), buffer and sphering agent.

DC B02 B04 S03

IN BEN-DAVID, D; COLELLA, G M; CUPO, A; FAN, S S; FISCHER, G; MARTIN, G E; ORNSTEIN, L

PA (FARB) BAYER CORP; (MOUN) MOUNT. SINAI SCHOOL MEDICINE; (MILE) MILES INC

CYC 23

PI	EP 545314	A1	19930609 (199323)*	EN	30	G01N015-14	
	R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE						
	AU 9228165	A	19930610 (199330)			G01N021-53	
	CA 2077788	A	19930606 (199335)			C09B019-00	<--
	JP 06180314	A	19940628 (199430)		19	G01N033-48	<--
	US 5350695	A	19940927 (199438)		34	G01N033-48	<--
	US 5438003	A	19950801 (199536)		34	G01N033-48	<--
	AU 9524835	A	19951214 (199606)			G01N015-14	
	TW 287232	A	19961001 (199707)			G01N033-49	
	IL 103054	A	19970713 (199734)			G01N033-50	
	AU 680143	B	19970717 (199739)			G01N015-14	
	EP 545314	B1	19980107 (199806)	EN	35	G01N015-14	
	R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE						
	DE 69223930	E	19980212 (199812)			G01N015-14	
	ES 2111599	T3	19980316 (199817)			G01N015-14	
	CA 2077788	C	19980714 (199839)			G01N033-52	
	JP 2802710	B2	19980924 (199843)		21	G01N033-48	<--
	KR 276144	B	20001215 (200175)			G01N033-48	<--

ADT EP 545314 A1 EP 1992-120308 19921127; AU 9228165 A AU 1992-28165 19921105; CA 2077788 A CA 1992-2077788 19920909; JP 06180314 A JP 1992-350136 19921204; US 5350695 A US 1991-802593 19911205; US 5438003 A Div ex US 1991-802593 19911205, US 1992-961591 19921015; AU 9524835 A Div ex AU 1992-28165 19921105, Div ex AU 1992-28167 19921105, AU 1995-24835 19950704; TW 287232 A TW 1993-103033 19930420; IL 103054 A IL 1992-103054 19920904; AU 680143 B Div ex AU 1992-28165 19921105, AU 1995-24835 19950704; EP 545314 B1 EP 1992-120308 19921127; DE 69223930 E DE 1992-623930 19921127, EP 1992-120308 19921127; ES 2111599 T3 EP 1992-120308 19921127; CA 2077788 C CA 1992-2077788 19920909; JP 2802710 B2 JP 1992-350136 19921204; KR 276144 B KR 1992-23170 19921203

FDT US 5438003 A Div ex US 5350695; AU 680143 B Previous Publ. AU 9524835; DE 69223930 E Based on EP 545314; ES 2111599 T3 Based on EP 545314; JP 2802710 B2 Previous Publ. JP 06180314; KR 276144 B Previous Publ. KR 93013730

PRAI US 1991-802593 19911205; US 1992-961591 19921015; US 1991-802585 19911205

REP 2.Jnl.Ref; EP 226272; EP 430719; EP 73554; JP 61079163

IC ICM **C09B019-00**; G01N015-14; G01N021-53; **G01N033-48**; G01N033-49; G01N033-50; G01N033-52

ICS **C09B021-00**; **C09B067-44**; G01N001-30; G01N021-27; G01N021-49; G01N021-64; G01N033-72

AB EP 545314 A UPAB: 20011220

Identification of subclasses of cells of interest in a blood sample by

flow cytometry comprises (a) mixing an aliquot of the blood sample with an aqs. reagent compsn. comprising a solution containing a sphering agent, (b) passing the suspension obtd. a cell at a time through an area of focused optical illumination, (c) detecting and measuring the light scattered and absorbed by each cell and (d) differentiating the cells of the subclass of interest at least in part on the basis of the measured magnitudes of the scattered and absorbed light.

USE/ADVANTAGE - Reagent compsns. can be used for the rapid and specific staining of reticulocytes, can be used for identifying reticulocytes and simultaneously measuring the volume, haemoglobin concentration and haemoglobin content of large numbers of individual reticulocytes and erythrocytes in a whole blood sample.

FS CPI EPI
FA AB; DCN
MC CPI: **B04-B04A1**; B04-B04D1; B04-B04D2; B04-B04D5; B06-E05; B06-F04; **B11-C07B**; B12-K04A
EPI: S03-E04C1; S03-E14H1; S03-F05C; S03-F06C

L45 ANSWER 5 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1993-143012 [17] WPIX
DNN N1993-109075 DNC C1993-064081
TI Identifying sectioned cells in tissue section - by staining with dye pair or dye and substrate and irradiating to identify cells at surface of section.
DC B04 D16 S03
IN KAMENTSKY, L A
PA (KAME-I) KAMENTSKY L A
CYC 1
PI US 5202230 A 19930413 (199317)* C12Q001-68
ADT US 5202230 A Cont of US 1990-579049 19900907, US 1992-912028 19920709
PRAI US 1990-579049 19900907; US 1992-912028 19920709
IC ICM C12Q001-68
ICS C12N013-00; **G01N033-48**
AB US 5202230 A UPAB: 19931025
Method comprises (a) supplying a tissue section, (b) supplying an energy-transferring dye pair comprising a first dye (D1) and a second dye (D2), the emission spectrum of D1 overlapping the absorption spectrum of D2, the overlap being sufficient to result in a detection-enabling amount of energy transfer from D1 to D2, the peak of the absorption spectrum of D1 being sufficiently separated from the peak of the absorption spectrum of D2 to allow a signal representing emissions from D2 (excited by absorbing emissions from D1 excited by energy of a wavelength absorbed by D1) to be distinguished from a signal representing emissions of D2 excited directly by energy of the wavelength used to excite D1, and the peak of the emission spectrum of D1 being sufficiently separated from the peak of emissions of D2 to allow a signal representing emissions from D2 to be distinguished from a signal representing emissions from D1, (c) staining the cells of the tissue section with D1, (d) contacting the cut surface of the stained tissue section with D2 and (e) irradiating the stained tissue section with energy in the absorption spectrum of D1 and detecting a signal representing the emissions of D2, the signal indicating the presence of a sectioned cell.

USE/ADVANTAGE - The methods provide for the identification of cells in contact with or in close proximity to the surface of a tissue section. Exclusion of these cells from analysis excludes cells cut or damaged by sectioning. The method is used partic. to provide a more accurate analysis of cancer cells.

Dwg.1/4
FS CPI EPI
FA AB; GI; DCN
MC CPI: **B04-B04A3**; **B11-C07B2**; **B12-K04A1**; **D05-H09**; D05-H10
EPI: S03-E13A; **S03-E14H6**

L45 ANSWER 6 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1993-117731 [14] WPIX
DNN N1993-089693 DNC C1993-052349
TI Asymmetrical cyanine dyes dimers useful for nucleic acid staining - exhibit enhanced fluorescence on binding with DNA or RNA.
DC B02 B04 D16 E23 S03
IN HAUGLAND, R P; JOHNSON, I D; YUE, S T
PA (MOLE-N) MOLECULAR PROBES INC
CYC 19
PI WO 9306482 A1 19930401 (199314)* EN 24 G01N033-48 <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE
W: CA JP

```
     EP 605655       A1 19940713 (199427)  EN         G01N033-48     <--
        R: AT BE CH DE FR GB LI NL
     CA 2119126      C  19960903 (199645)             C12Q001-68
     US 5582977      A  19961210 (199704)       12    C12Q001-68
     EP 605655       B1 19970507 (199723)  EN   22    G01N033-48     <--
        R: AT BE CH DE FR GB LI NL
     DE 69219610     E  19970612 (199729)             G01N033-48     <--
ADT  WO 9306482 A1 WO 1992-US7867 19920916; EP 605655 A1 EP 1992-924100
     19920916, WO 1992-US7867 19920916; CA 2119126 C CA 1992-2119126 19920916;
     US 5582977 A Cont of US 1991-761177 19910916, US 1994-180763 19940106; EP
     605655 B1 EP 1992-924100 19920916, WO 1992-US7867 19920916; DE 69219610 E
     DE 1992-619610 19920916, EP 1992-924100 19920916, WO 1992-US7867 19920916
FDT  EP 605655 A1 Based on WO 9306482; EP 605655 B1 Based on WO 9306482; DE
     69219610 E Based on EP 605655, Based on WO 9306482
PRAI US 1991-761177       19910916; US 1994-180763       19940106
REP  2.Jnl.Ref; EP 226272; US 4304408; US 4883867; US 4304908
IC   ICM  C12Q001-68; G01N033-48
     ICS  C07H021-00; C07H021-02; C07H021-04; C09B023-00;
          C09B023-01; C09B023-04; C09B023-06;
          C09B023-08; G01N033-52; G01N033-58
AB   WO   9306482 A UPAB: 19930924
     Dimers of unsymmetrical cyanine dyes (I) are new. In (I) R1, R2 = 1-6C
     alkyl; X = O, S or NR3; R3 = H or 1-6C alkyl; Z = O, S or NR4; R4 = H or
     1-6C alkyl; n, s = 0-2; Y = HC=CH; p, m, q, r = 0 or 1 such that p + m 1
     and q + r = 1; Bridge = -(CH2)a-(A'-(CH2)b)I-(A2-(CH2)c)II-A3-(CH2)d-; a-d
     = 2-4; I, II = 0 or 1; A1, A2, A3 = O, S, (CH2)u, NR5 or N+R6R7; u = 0 or
     1; R5-R7 = H or 1-6C alkyl. Also claimed is a cpd. comprising a nucleic
     acid polymer bound to a dye (I) with enhanced fluorescence.
          USE/ADVANTAGE - (I) are useful as stains for nucleic acids since they
     are sensitive to even small fragments of nucleic acid not contained inside
     living cells and nucleic acids in permeabilised cells. (I) are superior to
     other dimers and Thiazole Orange in their sensitivity to nucleic acids.
     The fluorescence of (I) bound to DNA or RNA is enhanced typically about
     1000 fold, sometimes as much as 5000 fold. The fluorescence intensity of
     the (I)-nucleic acid complex is proportional to the amount of nucleic acid
     in the sample. Because (I) do not readily cross the cell membrane of a
     healthy cell, the detection of fluorescence in a sample of whole cells can
     be used as an indicator of the viability of cells in the sample.
     2/5
FS   CPI EPI
FA   AB; GI; DCN
MC   CPI: B04-B04A1; B06-D02; B12-K04; D05-H09; D05-H12;
          E25-B
     EPI: S03-E04D; S03-E14H

L45  ANSWER 7 OF 13  WPIX  COPYRIGHT 2004 THE THOMSON CORP on STN
AN   1990-304605 [40]    WPIX
DNN  N1990-234138        DNC C1990-131570
TI   Thiazole orange-type fluorescent dyes - used for staining DNA or RNA
     partic. for determining reticulocyte age and counts.
DC   B04 D16 E12 E13 J04 S03
IN   CHEN, C H; LEE, L G
PA   (BECT) BECTON DICKINSON CO
CYC  1
PI   US 4957870      A  19900918 (199040)*
ADT  US 4957870 A US 1989-332657 19890403
PRAI US 1985-793813       19851101; US 1987-81097        19870803;
     US 1989-332637       19890403; US 1989-332657       19890403
IC   G01N033-48
AB   US   4957870 A UPAB: 19930928
     In a process for detecting reticulocytes, RNA or DNA in a sample, the
     improvement comprises adding to the sample a fluorescent dye of formula
     (I), exciting the sample with light of excitation wavelength and measuring
     fluorescence emitted from the sample.
          In (I) (X = O, S, Se or C(CH3)2; R1, R2 = 1-6C alkyl; R3 = fused
     benzene, 1-6C alkyl, methoxy or H; R4 = 1-6C alkyl, methoxy or H; n =
     0-6).
          USE/ADVANTAGE - The dyes give low fluorescent backgrounds and there
     is no precipitation of intracellular reticulocyte RNA.  There is a nearly linear
     relationship between the fluorescent signal measured for an individual
     reticulocyte age. Thus using the dyes, reticulocyte age profiles as well
     as simple reticulocyte counts can be carried out.
     0/8
FS   CPI EPI
FA   AB; GI; DCN
MC   CPI: B04-B04A1; B04-B04D1; B05-B01D; B06-D02; B11-C07B3
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; B12-K04A2; **D05-H09**; D05-H12; **E24-A02**;
E24-A03; J04-B01B
EPI: S03-E04E; S03-E09E; **S03-E14H**

L45 ANSWER 8 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1990-216838 [28] WPIX
DNN N1990-168482 DNC C1990-093695
TI New purinylidene-methyl-benzothiazolium cpd. fluorescent dyes - useful for selective staining of nucleic acids, e.g. in detection of blood-borne parasites by flow cytometry.
DC B02 B04 E13 E23 S03
IN LEE, L G; MIZE, P D
PA (BECT) BECTON DICKINSON CO
CYC 25
PI US 4937198 A 19900626 (199028)*
EP 410806 A 19910130 (199105)
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 9054714 A 19910131 (199112)
NO 9002236 A 19910129 (199114)
ZA 9003477 A 19910227 (199114)
CA 2015325 A 19910129 (199116)
FI 9003773 A 19910129 (199118)
JP 03066763 A 19910322 (199118)
HU 58738 T 19920330 (199217)
NO 173096 B 19930719 (199334) C07D473-00
EP 410806 B1 19940202 (199405) EN 11 C09B023-04 <--
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 06004768 B2 19940119 (199406) C09B023-00 <--
DE 69006417 E 19940317 (199412) C09B023-04 <--
KR 9308197 B1 19930826 (199433) C09B023-04 <--
ES 2062383 T3 19941216 (199505) C09B023-04 <--
CA 2015325 C 19950711 (199535) C09B023-04 <--
FI 95032 B 19950831 (199540) C07D473-00
IE 66053 B 19951213 (199608) C09B023-04 <--
PH 26501 A 19920807 (199634) G01N033-533
ADT US 4937198 A US 1989-386904 19890728; EP 410806 A EP 1990-308294 19900727; ZA 9003477 A ZA 1990-3477 19900508; JP 03066763 A JP 1990-158538 19900616; NO 173096 B NO 1990-2236 19900521; EP 410806 B1 EP 1990-308294 19900727; JP 06004768 B2 JP 1990-158538 19900616; DE 69006417 E DE 1990-606417 19900727, EP 1990-308294 19900727; KR 9308197 B1 KR 1990-11547 19900728; ES 2062383 T3 EP 1990-308294 19900727; CA 2015325 C CA 1990-2015325 19900424; FI 95032 B FI 1990-3773 19900727; IE 66053 B IE 1990-1379 19900418; PH 26501 A PH 1990-40456 19900502
FDT NO 173096 B Previous Publ. NO 9002236; JP 06004768 B2 Based on JP 03066763; DE 69006417 E Based on EP 410806; ES 2062383 T3 Based on EP 410806; FI 95032 B Previous Publ. FI 9003773
PRAI US 1989-386904 19890728
REP GB 2026712; US 3385850
IC C07D473-00; C07D487-04; **C09B023-04**; **C09B069-06**; C12Q001-68; G01N001-30; G01N021-64; G01N033-53; G01N037-00
ICM C07D473-00; **C09B023-00**; **C09B023-04**; G01N033-533
ICS C07D487-04; **C09B069-06**; C12Q001-68; G01N001-30; G01N021-64; **G01N033-48**; G01N033-50; G01N033-53; G01N037-00
AB US 4937198 A UPAB: 19930928
2-Purin-6-ylidenemethyl -benzothiazolium salts of formula (I) are new where R = Me or -CH2COO(-); and X = anion of valence -n.
USE/ADVANTAGE - (I) are fluorescent dyes which selectively stain both RNA and DNA, and are useful in detection of blood-borne parasites by flow cytometry. Background fluorescence is low since (I) give little or no staining of nucleated (immature) red blood cells, white blood cells and platelets. 3-methyl-2- (3,7-dimethyl -6-purinylidene)methyl -benzothiazolium iodide, of formula (IA).
1/2
FS CPI EPI
FA AB; GI; DCN
MC CPI: **B04-B04A1**; B04-B04D5; B04-B04M; B06-D09; B06-F01; **B11-C07B3**; B12-K04A4; **E24-A03**; **E24-C**; **E25-B**
EPI: S03-E09E; **S03-E14H**

L45 ANSWER 9 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1990-044091 [06] WPIX
DNN N1990-033750 DNC C1990-019357
TI New cpds. comprising dye-bound reticulocytes, DNA or RNA - dye, e.g. thiazole orange, useful as stain for detection of especially reticulocytes in flow cytometer.

DC B04 E23 J04 S03
IN CHEN, C H; LEE, L G
PA (BECT) BECTON DICKINSON CO
CYC 1
PI US 4883867 A 19891128 (199006)* 13
ADT US 4883867 A US 1987-81097 19870803
PRAI US 1985-793813 19851101; US 1987-81097 19870803
IC C07H015-12; C07H017-00; G01N031-00; **G01N033-48**
AB US 4883867 A UPAB: 19930928
Cpd. (I) composed of reticulocytes bound to a dye of formula (II) is new; where X = O, S, Se or CMe2; R1 = 1-6C alkyl; R2 = 1-6C alkyl; R3 = fused benzene, 1-6C alkyl, MeO or H; R4 = 1-6C alkyl, MeO or H; n = 0-6. Also new is a cpd. (I') composed of RNA bound to (II), and a cpd. (I") composed of DNA bound to (II).

USE/ADVANTAGE - Reticulocytes, RNA or DNA stained with (II) may be enumerated in an automatic flow cytometer (prefd.) and can also be counted by a manual procedure or by automated microscopy. The use of reticulocytes stained with thiazole orange (II; R1=R2=Me; R3=R4=X=S; n=0) in an automatic flow cytometer is particularly advantageous in that there are low fluorescent backgrounds and fluorescent gates may be easily selected by use of an unstained control. As there is no precipitation of intracellular reticulocyte RNA, the cells need not be fixed. In addition, there is a linear relationship between the fluorescent signal for an individual reticulocyte, which provides information as to reticulocyte age. Thiazole orange stained reticulocytes can be used in automatic flow cytometers with lower sensitivities, e.g. with a mercury arc lamp as opposed to an argon laser. Thiazole orange can be excited at 488 nm.
7/12
FS CPI EPI
FA AB; GI; DCN
MC CPI: **B04-B04A1**; B04-B04D1; B05-B01D; B06-D01; B06-D02; B06-E01; B06-F01; **B11-C07B2**; B11-C08; B12-K04A; **E25-B**; J04-B01
EPI: S03-E09E; S03-E14H1

L45 ANSWER 10 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1988-121264 [18] WPIX
DNN N1988-092047 DNC C1988-054313
TI Determn. of cell growth rate - by measuring cyanine dye levels in plasma membranes of daughter cells derived from parent cells labelled with the dye.
DC B04 D16 S03
IN HORAN, P K; JENSEN, B D; SLEZAK, S E
PA (SMIK) SMITHKLINE BECKMAN CORP
CYC 22
PI EP 266196 A 19880504 (198818)* EN 19
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
AU 8780402 A 19880505 (198826)
JP 63122955 A 19880526 (198827)
DK 8705605 A 19880501 (198829)
ZA 8708115 A 19880728 (198844)
PT 86029 A 19881130 (198905)
CN 87107220 A 19880511 (198925)
US 4859584 A 19890822 (198942) 13
IL 84295 A 19911215 (199207)
CA 1294544 C 19920121 (199210)
ADT EP 266196 A EP 1987-309556 19871029; JP 63122955 A JP 1987-277258 19871030; ZA 8708115 A ZA 1987-8115 19871029; US 4859584 A US 1986-925429 19861031
PRAI US 1986-925429 19861031
REP A3...9021; EP 266194; EP 54001; No-SR.Pub; US 4232121; US 4424201; WO 8403047
IC A61K049-00; C07D209-14; C07D403-06; C07D413-06; C07D417-06; **C09B023-02**; C12N001-00; C12N005-00; C12Q001-04; G01N001-30; G01N015-14; G01N021-64; **G01N033-48**
AB EP 266196 A UPAB: 19930923
Determn. of cell growth rate comprises measuring changes in levels of cyanine dye (I) in the plasma membranes of daughter cells derived from parent cells labelled with (I).

Changes in the (I) level are pref. measured by the fluorescence. The cells tested include tissue culture cells, human tumour cells, white blood cells, bacterial cells, yeast cells etc. (I) is suitably DISC 14(5) or DiOC 14(3), e.g. absorbing light at over 680 nm. Cell labelling is effected with (I) in a suitable medium so that cell viability is not affected.

USE/ADVANTAGE - The procedure may be used in vivo to monitor healing

of corneal epithelia and engraftment of transplanted bore narrow cells; and e.g. in vitro for determn. of the sensitivity of tumour cells to chemotherapeutic agents. especially for screening such agents for efficacy, and correspondingly for bacterial cells yeasts.
0/4
FS CPI EPI
FA AB; DCN
MC CPI: B04-B02B1; B04-B02B2; **B04-B04A**; B04-B04D1; **B11-C07B3**; **B11-C08E1**; B12-K04; D05-H04; D05-H05; **D05-H08**; **D05-H09**
EPI: **S03-E14H**

L45 ANSWER 11 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1984-166275 [27] WPIX
DNN N1984-123758 DNC C1984-070171
TI Distinguishing cells in biological samples - by staining with pyrylium or thiapyrylium cpd..
DC B04 E13 J04 S03
IN BELLY, R T; FRANK, D S
PA (EAST) EASTMAN KODAK CO
CYC 7
PI EP 112552 A 19840704 (198427)* EN 38
R: DE FR GB IT
JP 59133460 A 19840731 (198436)
CA 1194766 A 19851008 (198545)
US 4555396 A 19851126 (198550)
EP 112552 B 19890301 (198909) EN
R: DE FR GB IT
DE 3379283 G 19890406 (198915)
US 4840784 A 19890620 (198931)
ADT EP 112552 A EP 1983-112910 19831221; JP 59133460 A JP 1983-241095 19831222; US 4555396 A US 1985-764151 19850809
PRAI US 1982-452260 19821222; US 1985-764151 19850809
REP A3...8542; FR 1222952; No-SR.Pub; US 3250615; US 3579345; US 3684377; US 3938994; US 4173473; US 4232121
IC **C09B057-00**; C12Q001-04; G01N001-30; **G01N033-48**
AB EP 112552 A UPAB: 19930925
The cells are distinguished by staining with a pyrylium (I) or . thiapyrylium (II) cpd. Cpds. (I) and (II) are useful as vital and fixed cell stains and can be used without a wash step. They are especially useful for differentiation of biological cells and tissues (I) and (II) are described in US 3141770, 3148067 etc.
Pref. (I) or (II) is of formula (III), where G is O or S; R1, R3 and R5 are H, alkyl, aryl, aralkyl, NH2, styryl, bis(diaryl)-vinylene or CH(:CRCH)n:CZ; R is H or alkyl; Z is the residue of a heterocyclic system of the type used in cyanine dyes; n is 0 or 1; R2 is H or with R1 or R3 completes an aromatic or carbocyclic ring system; R4 is H or with R3 or R5 completes an aromatic or carbocyclic ring system; and X is an anion.
0/0
FS CPI EPI
FA AB
MC CPI: **B04-B04A**; B06-A01; B06-A02; B06-B01; B07-A03; B07-B02; **B11-C07B**; B12-K04; E06-H; E07-A03C; E07-B02; **E25-B**; J04-B01B
EPI: S03-E13D; **S03-E14H**

L45 ANSWER 12 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1983-63343K [26] WPIX
DNN N1983-113042 DNC C1983-061500
TI Detection of protein isolated on electrophoretic gels - by staining with nitro thiazolyl-azo naphthol di sulphonic acid dyestuff.
DC A96 B04 E21 S03
IN KASYMOVA, G F; KOPITSYA, T P; KORYAKINA, N I
PA (CHCH-N) CHEM INST
CYC 1
PI SU 951121 B 19820815 (198326)* 2
PRAI SU 1980-3229035 19801029
IC **G01N033-48**
AB SU 951121 B UPAB: 19930925
In biochem studies procedures are available for detecting proteins in polyacrylamide gels. The proteins are isolated by electrophoresis and subsequently stained with a dyestuff. The overall procedure is accelerated by using 1-(5-nitro-2-thiazolylazo)- 2-naphthol- 3,6-disulphonic acid of formula (I).
After electrophoresis, the gels are stained with a 0.2% solution of (I) in a mixture of methanol-water-acetic acid (5:5:1).

When (I) was used for staining, a concentrate equivalent to 10 power minus 5 to 10 power minus 10M of protein, was visible after 6 min., witout washing out excess dyestuff. The total analytical time is 6 min against 30-60 min but it is 15 hrs for the comparison dyestuffs, which require removal by washing. Bul.30/15.8.82.

FS CPI EPI
FA AB
MC CPI: A04-D04A; A12-L04; A12-V; **B04-B04A**; B04-C03B; B07-F01; **B11-C07B**; B12-K04; **E21-B05**
EPI: S03-E03X; S03-E09E; **S03-E14H**

L45 ANSWER 13 OF 13 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN
AN 1981-80356D [44] WPIX
TI Staining nucleic acids with cationic fluorescent dyes - of the 4-amino styryl-heterocycle type, excitable with visible light.
DC B04 E23 J04 S03
IN JULLEY, M E; WANG, C H J
PA (ABBO) ABBOTT LAB
CYC 6
PI GB 2074340 A 19811028 (198144)* 7
BE 888509 A 19811021 (198145)
FR 2480943 A 19811023 (198148)
JP 56158944 A 19811208 (198203)
DE 3115278 A 19820318 (198212)
DE 3115278 C 19830818 (198334)
CA 1155041 A 19831011 (198345)
GB 2074340 B 19840215 (198407)
JP 63061622 B 19881129 (198851)
ADT GB 2074340 A GB 1981-5360 19810220; JP 56158944 A JP 1981-54463 19810413
PRAI US 1980-142321 19800421; US 1981-278812 19810629
IC C07H021-00; C09K000-00; C12Q001-68; G01N001-30; **G01N033-48**
AB GB 2074340 A UPAB: 19930915
Nucleic acids are detected in biological samples by staining them with fluorescent dyes of formula (I): n is 0 or 1, m is 1 or 2, R is 1-4C alkyl opt. substd. by di(1-4C) alkylamino, R1 and R2 are each H, or lower alkyl opt. substd. by halo. R3 is H, lower alkyl, lower alkoxy or amino. Z is a gp. of atoms completing a benzothiazole, indolenine, naphthothiazole, benzoselenazole, benzoxazole, quinoline or pyridine nucleus, opt. substd. by lower alkyl, halo, nitro or dialkylamino, X is an anion. Pref. cpds. have n as zero and m as 1.

(I) are useful e.g. for detecting organisms in various samples; in microfluorescent cytology; flow cytofluorimetry (to screen urine and water) and for analysing blood, since they stain plasmids, reticulocytes, leucocytes and platelets. (I) are nonfluorescent when free, but highly fluorescent when bound to double-strand DNA and, for most dyes, to single-strand RNA, and can be excited at visible wavelengths. Some dyes have high fluorescent quantum yields so only a small quantity is needed.

FS CPI EPI
FA AB
MC CPI: **B04-B04A**; B04-B04B; B04-B04D; B05-B01D; B06-H; B07-D04; **B11-C07B**; B12-K04; **E24-A02**; **E24-A03**; **E25-B**; J04-B01B
EPI: S03-E13D; S03-E14H9

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